

Although the evidence has shown that the design of the accused device is not exactly the same as the claimed D'678 design, Staff contends the differences between the two designs would not affect the overall impression of an ordinary observer that the designs are *substantially* the same. (*Id.* at 38-39.) In light of the analysis provided by Apple, the Staff believes that the D'678 Accused Products infringe the claimed design of the D'678 patent.

Samsung first references its argument that there is no evidence that an ordinary observer giving such attention as would be given during the decision to purchase would be deceived. (RIB at 76.) Samsung then argues that the scope of the D'678 patent is narrowed by the prior art. (RIB at 76-81.) Specifically, Samsung contends that U.S. Patent No. D534,516 ("D'516") (RX-621), the LG Chocolate device, Japanese design patent JP D1241638 ("JP638") (JX-0099), Korean design registration 30-094921 ("KR'921") (RX-0516 at 8), and U.S. Patent No. D504,889 ("D'889") (RX-2602; JX-0002) narrow the scope of the D'678 patent. (*Id.*) Samsung also alleges that Apple inconsistently applied the ordinary observer standard.

Samsung also argues the differences between the D'678 Accused Devices and the claimed design of the D'678 patent create substantially different visual impressions. (RIB at 82-83.) Samsung contends that the accused products have distinctly wider borders to the sides of the display and thinner borders above and/or below the display screen than the D'678 patent, as well as other details on the front surface, including writing above and/or below the display, circular elements (corresponding to sensors and cameras) near the top of the front face, and soft buttons with graphics near the bottom of the front face. (*Id.* at 82.) Additionally, Samsung contends the accused products also have an oblong shape cut into the front face (corresponding to a receiver element) that is differently shaped and located closer to the top of the front face than

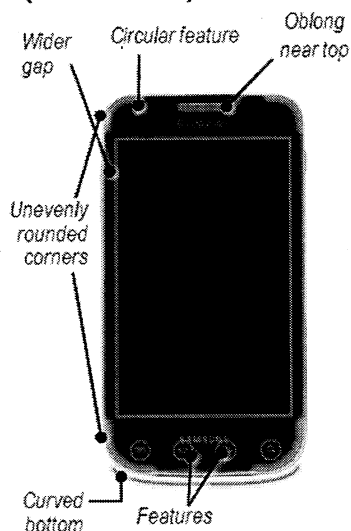
the lozenge feature in the D'678 patent. (*Id.*) Samsung also argues the exterior perimeters of the front surfaces of the accused products also are shaped differently and have different curvature radii of their rounded corners than the D'678 patent. (*Id.*) In addition, Samsung argues most of the accused products have a substantially black front surface, which make them significantly different from the D'678 patent, particularly because the black color used by Samsung makes the interior rectangle, the borders and the oblong shape difficult even to discern. (*Id.*) Finally, Samsung contends the accused products have a different aspect ratio than is shown in the D'678 patent and in some cases the screen is not centered vertically. (*Id.*) Samsung alleges these differences, which are common to all the accused Samsung products, show that the accused products are not substantially the same as the D'678 patent design. (*Id.* at 82-83).

In addition to the general arguments above, Samsung specifically addresses each of the D'678 Accused Devices. (RIB at 83-91.)

Galaxy S II (SGH-T989)

In addition to the differences common to all accused Samsung products as compared with the D'678 patent, Samsung contends the lower edge of the Galaxy S II (SGH-T989) within the bezel is also distinctly rounder than the top edge, such that its exterior edge does not rest flush on a table if held upright perpendicular to the table's surface. (RIB at 83; *see also* RDX-37-43.) In addition, Samsung contends the shape of the receiver feature does not have convex rounded edges; rather they curve upwards more like an elongated bowl shape. (*Id.*) Samsung argues the Galaxy SII product's front surface also includes writing above and below the display, and four elements near the bottom of the front face, including graphical icons to denote touch sensitive areas of the display screen, which the D'678 patent lacks. (*Id.*)

**Accused Samsung  
Galaxy S II  
(SGH-T989) Product**

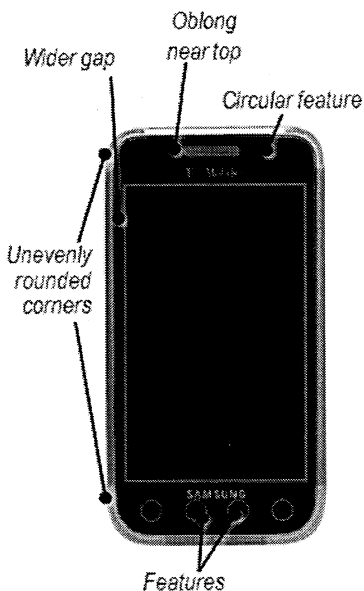


(RX-3631 at 71; RDX-37-43).

Galaxy S 4G/Vibrant

In addition to the differences common to all accused Samsung products as compared with the D'678 patent, Samsung contends the Galaxy S 4G and Vibrant products have a different overall impression due to the curvature radius of the rounded top corners being different than the curvature radius of the bottom corners on the front face, and different from the evenly rounded corners of the D'678 patent. (RIB at 84; *see also* RDX-37-37). The Galaxy S 4G and Vibrant products' front surface also includes writing above and below the display and four elements near the bottom of the front face, including graphical icons to denote touch sensitive areas of the display screen, all of which the D'678 patent lacks. (*Id.*)

**Accused Samsung  
Galaxy S 4G Product**



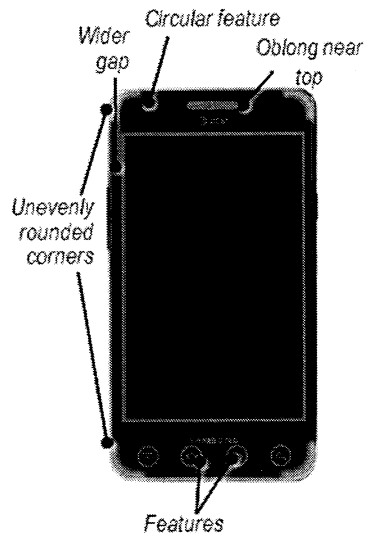
(RX-3631 at 62; RDX-37-37).

Galaxy S II (SGH-1777)

In addition to the differences common to all accused Samsung products as compared with the D'678 patent, Samsung contends the Galaxy S II's (SGH-1777) front surface also includes writing above and below the display, and four elements near the bottom of the front face, including graphical icons to denote touch sensitive areas of the display screen, all of which the D'678 patent lacks. (RIB at 84-85; *see also* RDX-37-40.) The curvature radius of the front surface of the Galaxy S II is also different and sharper than that of the D'678 patent. (*Id.*)



**Accused Samsung  
Galaxy S II  
(SGH-I777) Product**

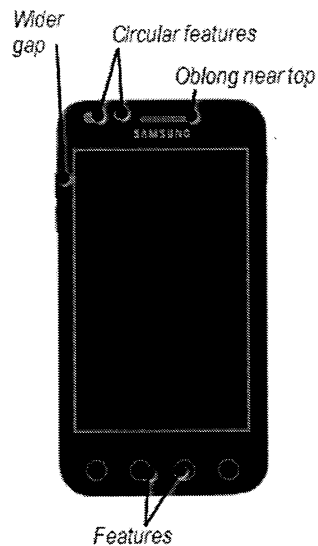


(RX-3631 at 66; RDX-37-40).

Epic Touch

In addition to the differences common to all accused Samsung products as compared with the D'678 patent, Samsung contends the Epic Touch's front surface also includes writing above the display, and four elements near the bottom of the front face, including graphical icons to denote touch sensitive areas of the display screen, which the D'678 patent lacks. (RIB at 85-86; *see also* RDX-37-46.)

**Accused Samsung  
Epic Touch Product**

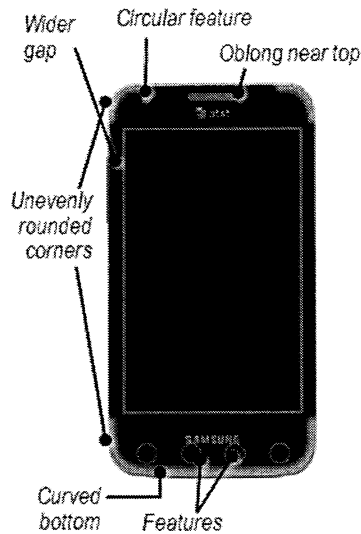


(RX-3631 at 75; RDX-37-46).

Galaxy S II Skyrocket (I727)

In addition to the differences common to all accused Samsung products as compared with the D'678 patent, Samsung contends the Galaxy S II Skyrocket's front surface also includes writing above and below the display and four elements near the bottom of the front face, including graphical icons to denote touch sensitive areas of the display screen, which the D'678 patent lacks. (RIB at 86-87; *see also* RDX-37-49.)

**Accused Samsung  
Galaxy S II  
Skyrocket Product**

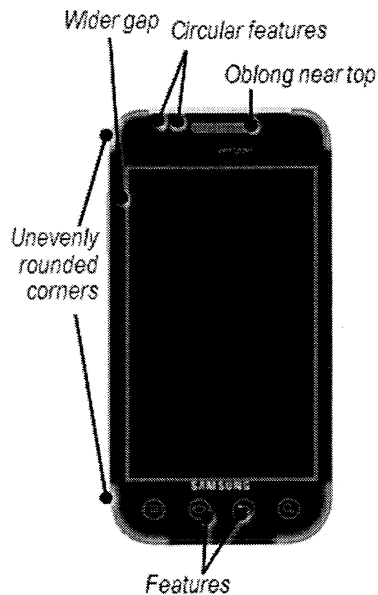


(RX-3631 at 79; RDX-37-49).

Mesmerize, Showcase and Fascinate

In addition to the differences common to all accused Samsung products as compared with the D'678 patent, Samsung contends the Mesmerize, Showcase and Fascinate products' front surfaces also include a two small circular features near the top left corner of the front face, writing above and below the display, and four elements near the bottom of the front face, including graphical icons to denote touch sensitive areas of the display screen – all of which the D'678 patent lacks. (RIB at 87-88; *see also* RDX-37-52.)

**Accused Samsung  
Mesmerize/Showcase/  
Fascinate Product**



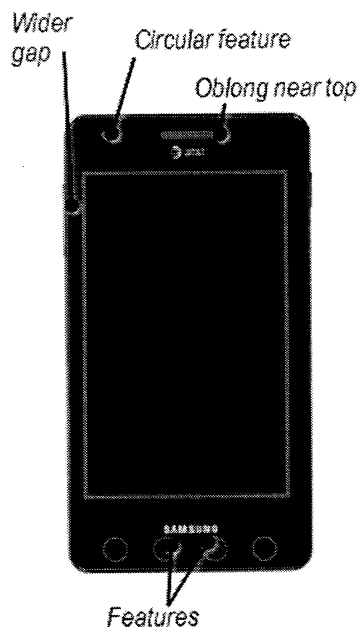
(RX-3631 at 83; RDX-37-52.)

Infuse 4G (SGH-I997)

In addition to the differences common to all accused Samsung products as compared with the D'678 patent, Samsung contends the Infuse 4G's front surface also includes writing above and below the display and four elements near the bottom of the front face, including graphical icons to denote touch sensitive areas of the display screen -- all of which the D'678 patent lacks.

(RIB at 88-89; *see also* RDX-37-55.)

### Accused Samsung Infuse 4G Product

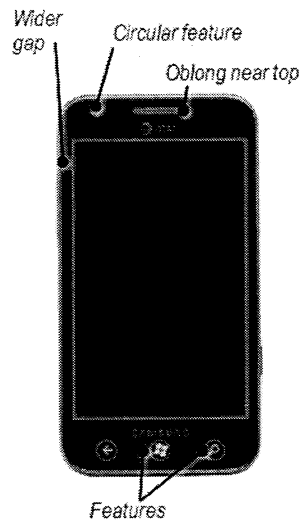


(RX-3631 at 87; RDX-37-55).

#### Focus S

In addition to the differences common to all accused Samsung products as compared with the D'678 patent, Samsung contends the Focus S product's front surface also includes a circular feature near the top left corner of the front face, writing above and below the display, and three elements near the bottom of the front face, including graphical icons to denote touch sensitive areas of the display screen -- all of which the D'678 patent lacks. (RIB at 89-90; *see also* RDX-37-58.)

**Accused Samsung  
Focus S Product**

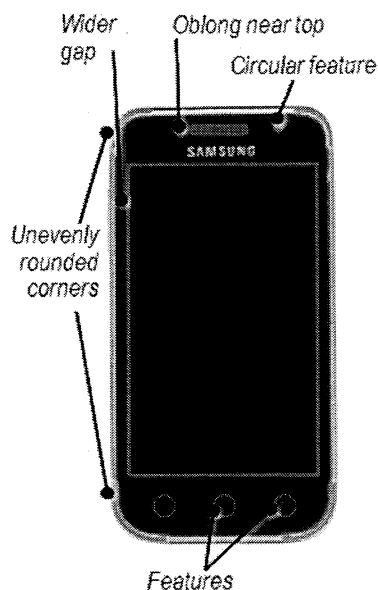


(RX-3631 at 91; RDX-37-58).

Galaxy Player 4.0

In addition to the differences common to all accused Samsung products as compared with the D'678 patent, Samsung contends the Galaxy Player 4.0 product's front surface also includes a circular feature near the top right corner of the front face, writing above the display, and three elements near the bottom of the front face, including graphical icons to denote touch sensitive areas of the display screen — all of which the D'678 patent lacks. (RIB at 90-91; *see also* RDX-37-61.)

**Accused Samsung  
Galaxy Player 4.0  
Product**



(RX-3631 at 95; RDX-37-61).

**Analysis**

Samsung's deception argument again is given no weight, as it misapplies the law. (*See Section I.E.*)

Samsung also argues that the scope of the D'678 patent is narrowed by the prior art. (RIB at 76-81.) Specifically, Samsung contends that U.S. Patent No. D534,516 ("D'516") (RX-621), the LG Chocolate device, Japanese design patent JP D1241638 ("JP638") (JX-0099), Korean design registration 30-094921 ("KR'921") (RX-0516 at 8), and U.S. Patent No. D504,889 ("D'889") (RX-2602; JX-0002) narrow the scope of the D'678 patent. (*Id.*) First, there is no evidence on the record that the LG Chocolate (RPX-89) is prior art to the D'678

patent. Furthermore, because Samsung failed to argue that the scope of the D'757 patent was narrowed by the prior art in its prehearing brief, this argument is deemed waived. (Ground Rule 9.2.) Even if not waived, this argument still fails because there is no legal support for considering pieces of prior art for purposes of limiting and defining the scope of the claims. The Federal Circuit described the prior art only as “a frame of reference” for the ordinary observer test, not as an infringement tool:

[I]t can be difficult to answer the question whether one thing is like another without being given a frame of reference. The context in which the claimed and accused designs are compared, *i.e.*, the background prior art, provides such a frame of reference and is therefore often useful in the process of comparison.

*Egyptian Goddess*, 543 F.3d at 677. For example, in using the prior art as a frame of reference for the comparison step of the infringement analysis, the Court in *Egyptian Goddess* compared the accused nail buffer design to the patented nail buffer design and considered whether an ordinary observer would find the accused design to be closer to the patented design than to the prior art. *Id.* at 682. Nothing in *Egyptian Goddess* or any other case I could find supports using the prior art to “limit the scope” of an asserted design patent for infringement purposes as Samsung suggests.

Consistent with Apple’s broad construction of the patented design, Apple argues that the Galaxy S 4G/Vibrant is representative of the D’678 Accused Products. Likewise, consistent with Samsung’s more narrow construction, Samsung divides the D’678 Accused Products into nine groupings. I will analyze infringement according to the groupings set forth by Samsung as I find these groupings better reflect the differences between the accused products. (*See* RPX-149 (Galaxy S 4G), RPX-165 (Vibrant); RPX-156 (Mesmerize), RPX-161 (Showcase), RPX-144 (Fascinate); CPX-0053 (Galaxy Player 4.0); CPX-0057 (Galaxy S II – AT&T); CPX-0058

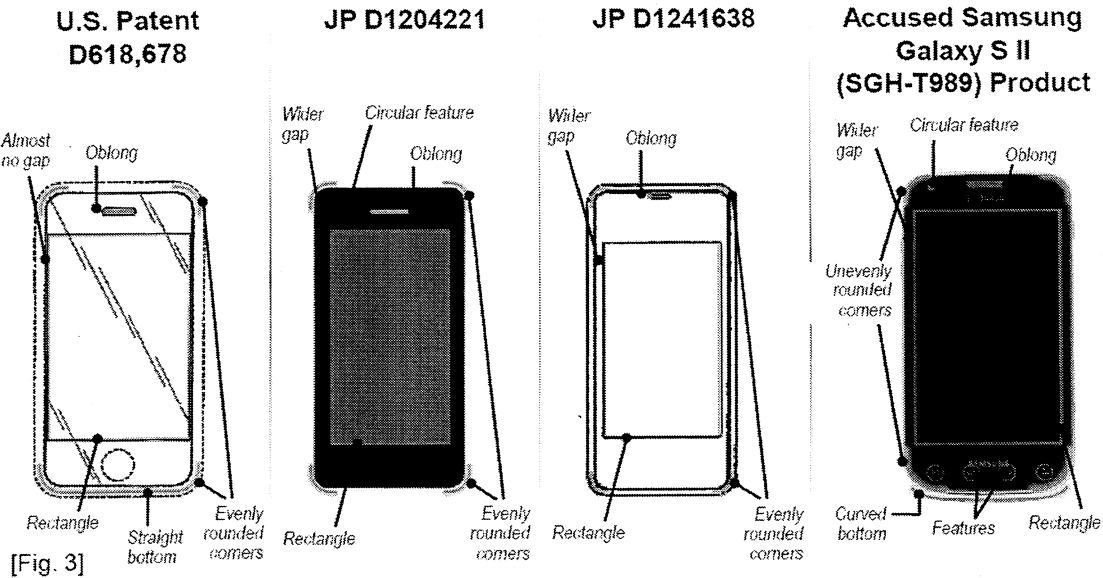


(Galaxy S II – T-Mobile); CPX-0040 (Epic Touch); CPX-0059 (Galaxy S II Skyrocket); CPX-0083 (Infuse 4G); CPX-0048 (Focus S)). Although the following discussion addresses specific differences between the claimed design of the D’678 patent and the D’678 Accused Products, I note that I considered these details is in the context of the overall impression created by the D’678 Accused Product. The illustrations of the claimed design, prior art, and accused products are included to help elucidate my infringement analysis. The annotations were included by Samsung. Because the test requires a comparison of the accused product with the claimed design, I used the **physical** exhibits in my analysis and accord the annotations no weight unless I have specifically discussed them in my infringement analysis.

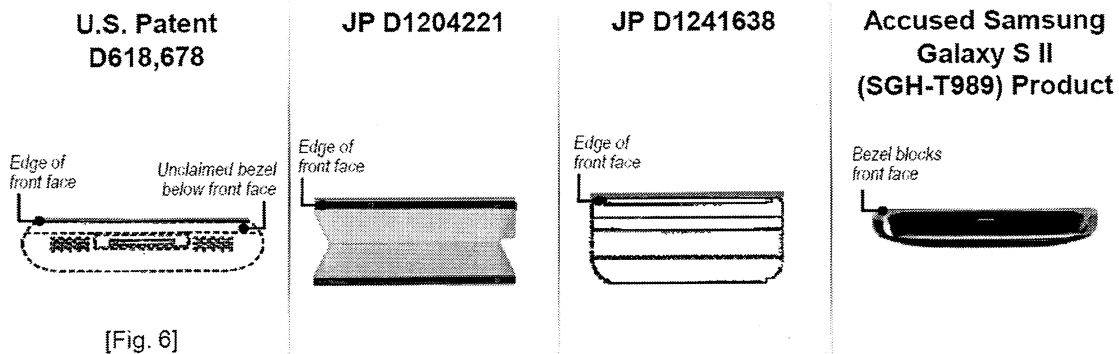
1. **The Galaxy S II (SGH-T989)**

When comparing the D’678 claimed design to the **physical** exhibits of the Galaxy S II (T989) (CPX-0058) in light of the prior art, the overall impression of the D’678 patent is not substantially similar to the overall impression of the Galaxy S II (SGH-T989). The D’678 patent evinces a symmetric and minimalistic design described by Apple in their post hearing brief as reflecting “the ‘fundamental idea’ of the original iPhone in the form of a flat transparent surface with specific surface geometries . . . Apple created in the iPhone an iconic image of a “dark, oily pond from which a display would magically appear when touched, permitting the user to interact with it.” (CIB at 42.) In the front views of the D’678 patent and the Galaxy S II (SGH-T989), however, I note a number of differences that contribute to the dissimilarity between the overall impression of the D’678 patent and the overall impression of the Galaxy S II (SGH-T989). (*See* RDX-37-43.) These differences are exemplified by figures RDX-37-43, RDX-37-44, and RDX-37-45 below. I reiterate that although the following discussion addresses specific differences

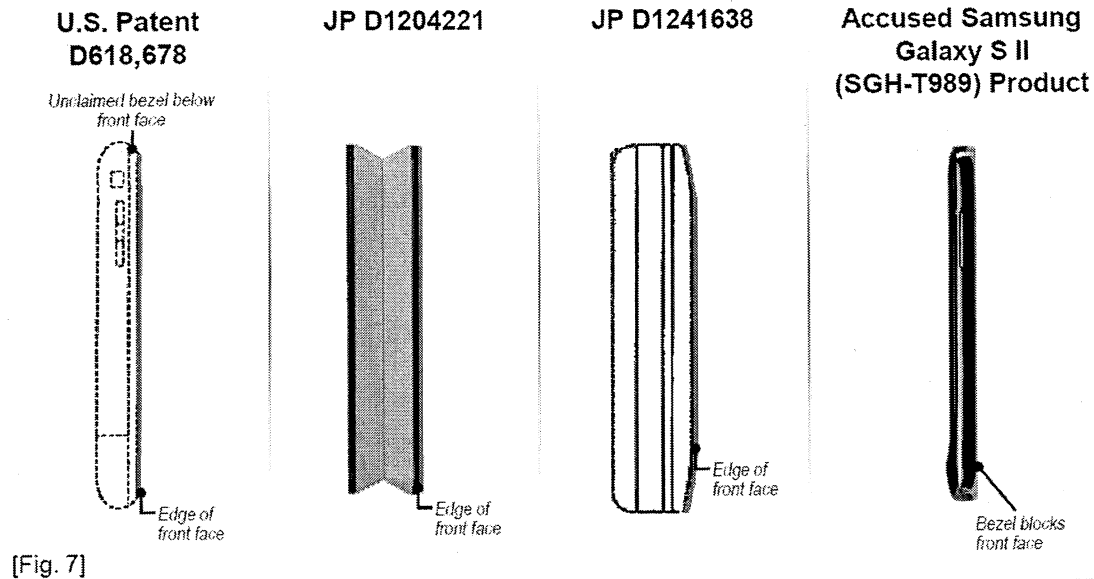
between the claimed design of the D'678 patent and the Galaxy S II (SGH-T989), I considered these details is in the context of the overall impression created by the Galaxy S II (SGH-T989).



(RDX-37-43)



(RDX-37-44)



(RDX-37-45)

The top and bottom edges of the claimed and accused designs demonstrate the dissimilarity between the D'678 patent's impression of symmetry and the asymmetric impression of the Galaxy S II (SGH-T989). (*Compare JX-0002 with CPX-0058; see also RDX-37-43.*) Both the claimed design of the D'678 patent and the Galaxy S II (SGH-T989) design include a single continuous piece of transparent material that is rectangular in overall shape with rounded corners. (*Compare JX-0002 with CPX-0058; see also RDX-37-43.*) The Galaxy S II (SGH-T989), however, has a rounded bottom edge and a different radius of curvature for both the top and bottom edges, creating an asymmetric impression. (CPX-0058.) In contrast, the D'678 patent has four equal, evenly rounded corners, creating a symmetric impression. (*Compare JX-0002 with CPX-0058.*)

The positioning of the lozenge-shaped feature on the claimed and accused designs further demonstrates the dissimilarity between the D'678 patent's impression of symmetry and the uneven impression of the Galaxy S II (SGH T989). (*Compare JX-0002 with CPX-0058; see also*

RDX-37-43.) Both the claimed design of the D'678 patent and the Galaxy S II (SGH-T989) have a lozenge-shaped element horizontally centered in the area above the rectangular element. (*Id.*) The Galaxy S II (SGH-T989), however, has the lozenge-shaped element substantially closer to the top edge of the phone than the rectangular element. (CPX-0058; *see also* RDX-37-43.) In contrast, the claimed design of the D'678 patent has the lozenge-shaped feature is vertically symmetric between the top edge of the face and the rectangular element. Samsung has noted small additional features in the bottom border of the Galaxy S II (SGH-T989) which are somewhat noticeable, but I find that because of their small size and similar coloring, these features tend to blend into the face and thus do not contribute to the difference in impression between the claimed and accused designs.

In addition, the positioning of the rectangular element on the claimed and accused designs demonstrates the dissimilarity between the D'678 patent's impression of symmetry and the uneven impression of the Galaxy S II (SGH T989). (*Compare* JX-0002 with CPX-0058; *see also* RDX-37-43.) Both the claimed design of the D'678 patent and the Galaxy S II (SGH-T989) have a rectangular element surrounded by narrow borders on the lateral sides and wider borders above and below. (*Compare* JX-0002 with CPX-0058; *see also* RDX-37-43.) The Galaxy S II (SGH-T989), however, has slightly wider lateral borders and top and bottom borders which are uneven in width. (CPX-0058; *see also* RDX-37-43.) In contrast, the claimed design of the D'678 patent has very narrow lateral borders and top and bottom borders which are symmetric.

Accordingly, I find that an ordinary observer would conclude that the overall visual impression of the Galaxy S II (SGH-T989) is not substantially the same as the overall visual

impression of the design claimed in the D'678 patent when considered in light of the prior art and thus does not infringe the D'678 patent.

## 2. The Galaxy S 4G and Vibrant

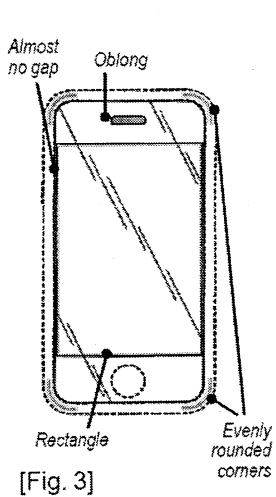
When comparing the claimed design of the D'678 patent to the **physical** exhibits of the Galaxy S 4G (CPX-0056) and Vibrant (CPX-0141), in light of the prior art, the overall impression of the Galaxy S 4G and Vibrant is substantially similar to the overall impression of the claimed design of the D'678 patent. These substantially similar impressions are exemplified by figures RDX-37-37, RDX-37-38, and RDX-37-39 below. The D'678 patent evinces a simplistic and minimalistic design described by Apple in their post hearing brief as reflecting “the ‘fundamental idea’ of the original iPhone in the form of a flat transparent surface with specific surface geometries . . . Apple created in the iPhone an iconic image of a “dark, oily pond from which a display would magically appear when touched, permitting the user to interact with it.” (CIB at 42.)

Likewise, the Galaxy S 4G/ Vibrant also give an impression of simplicity and balance. Both the claimed design of the D'678 patent and the Galaxy S 4G/ Vibrant designs include a single continuous piece of transparent material that is rectangular in overall shape with rounded corners. (*Compare* JX-0002 with CPX-0056, CPX-0141; *see also* RDX-37-37). In addition, for both the claimed design of the D'678 patent and the Galaxy S 4G/Vibrant, the transparent material is flat and extends edge-to-edge across the entire front surface. (*Id.*; *see also* RDX-37-38, RDX-37-39.) Also, for both the claimed design of the D'678 patent and the Galaxy S 4G/ Vibrant a rectangular element surrounded by narrow balanced borders on the lateral sides and wider balanced borders above and below is visible in this transparent material. (*Compare* JX-

0002 *with* CPX-0056, CPX-0141; *see also* RDX-37-43.) Finally, for both the claimed design of the D'678 patent and the Galaxy S 4G/Vibrant there is a lozenge-shaped element horizontally centered in the area above the rectangular element. (*Id.*).

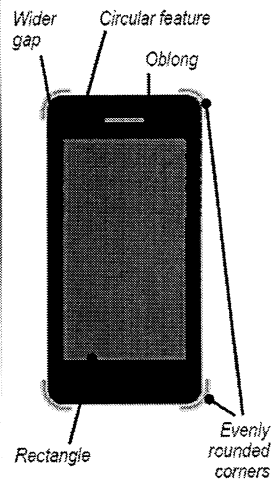
I find the minor differences highlighted by Samsung unpersuasive. Samsung argues the curvature radius of the rounded top corners appears different than the curvature radius of the bottom corners on the front face of the Galaxy S 4G/Vibrant, and the curvatures are different from the evenly rounded corners of the D'678 patent. I find these differences are so slight and the impact on the overall impression of the phone so negligible that they would not demonstrate a substantial difference in the overall impression of the Galaxy S4G/Vibrant to an ordinary observer. (*See* CPX-0056, CPX-0141.) Samsung also argues the writing above and below the display and four elements near the bottom of the front face, including graphical icons to denote touch sensitive areas of the display screen, distinguishes the Galaxy S 4G/Vibrant from the D'678 design. I find the icons blend into the background of the display due to their size and coloring and thus do not prevent finding the Galaxy S 4G/Vibrant and the D'678 design substantially similar. (*Id.*) Thus, I do not find that any differences between the Galaxy S 4G/Vibrant and the claimed design of the D'678 patent alter the similarity between the overall impressions of the designs for an ordinary observer.

U.S. Patent  
D618,678

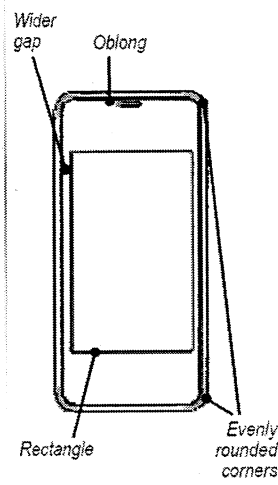


[Fig. 3]

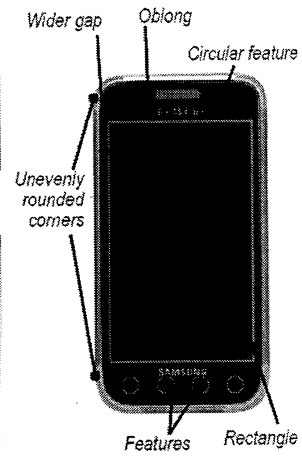
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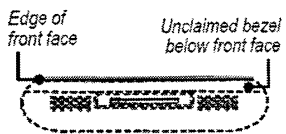


Accused Samsung  
Galaxy S 4G Product



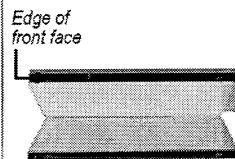
(RDX-37-37)

U.S. Patent  
D618,678

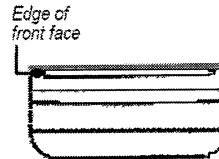


[Fig. 6]

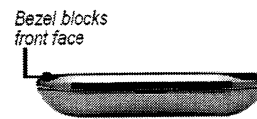
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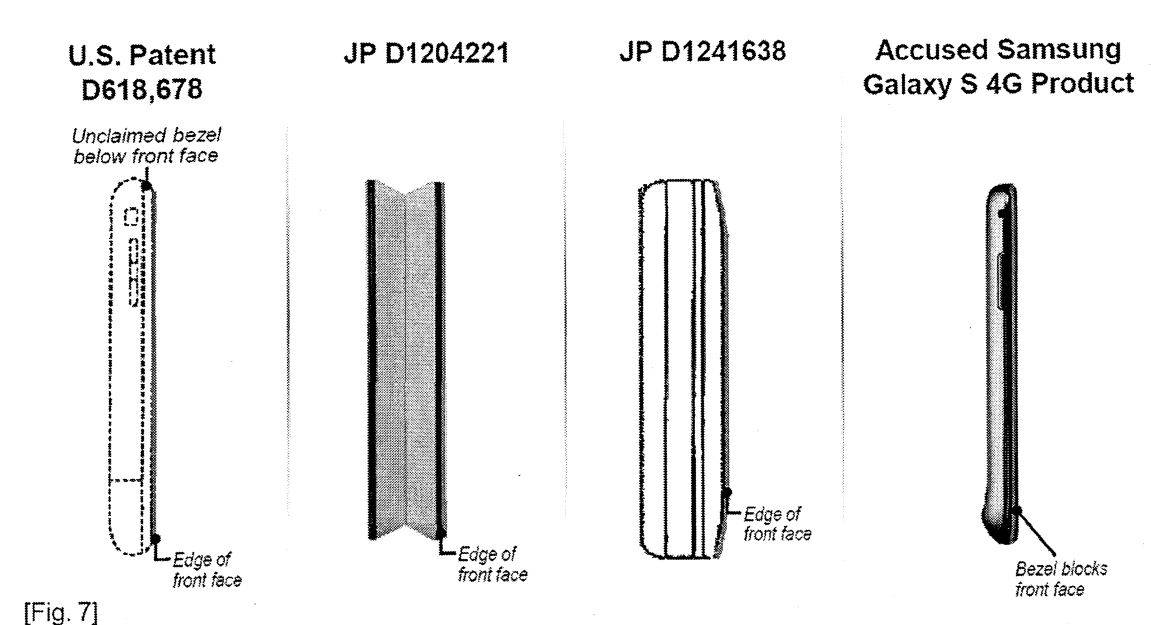
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Accused Samsung  
Galaxy S 4G Product



(RDX-37-38)



(RDX-37-39)

Accordingly, I find that an ordinary observer would conclude that the overall visual impression of the Galaxy S 4G/ Vibrant are substantially the same as the overall visual impression of the design claimed in the D'678 Patent when considered in light of the prior art and thus infringe the D'678 patent.

### 3. The Galaxy SII (SGH-I777)

When comparing the D'678 design to the **physical** exhibits of the Galaxy S II (SGH-I777) (CPX-0057), in light of the prior art, the overall impression of the Galaxy S II (SGH-I777) is substantially similar to the overall impression of the claimed design of the D'678 patent. The substantial similarity of the impressions is exemplified by figures RDX-37-40, RDX-37-41, and RDX-37-42 below. The D'678 patent evinces a simplistic and minimalistic design described by Apple in their post hearing brief as reflecting "the 'fundamental idea' of the original iPhone in the form of a flat transparent surface with specific surface geometries . . . Apple created in the

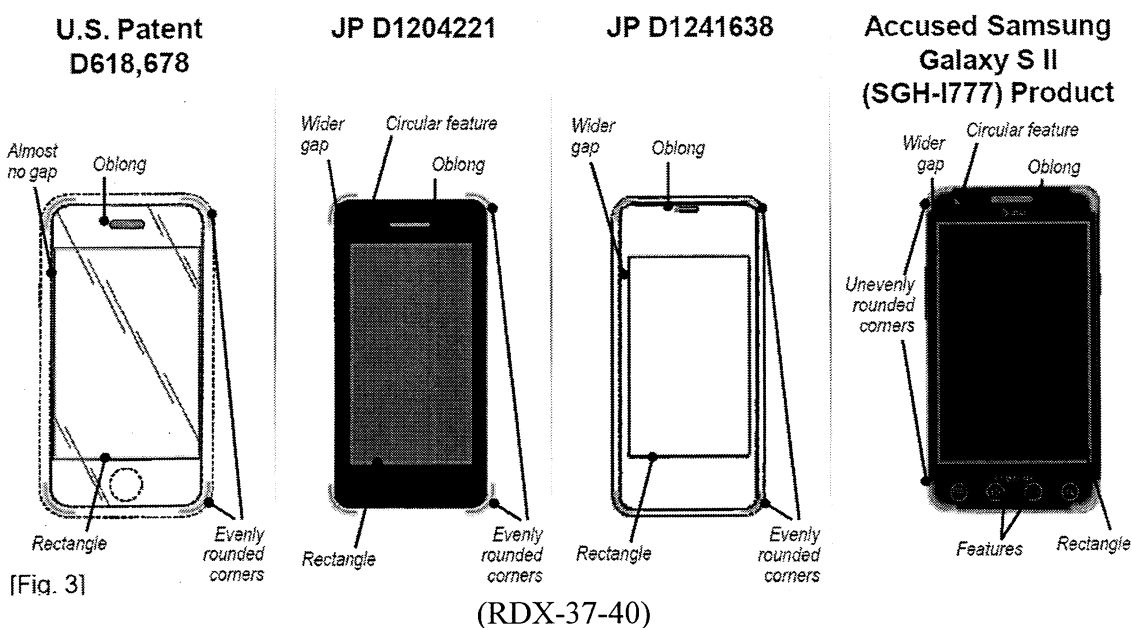


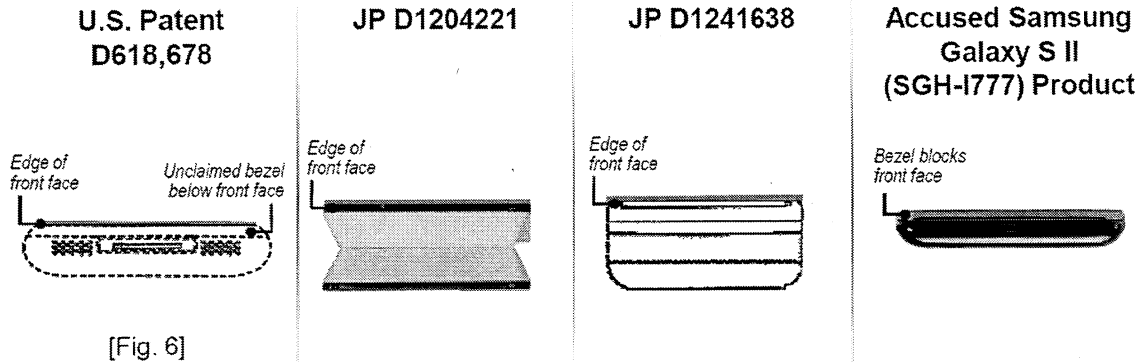
iPhone an iconic image of a “dark, oily pond from which a display would magically appear when touched, permitting the user to interact with it.” (CIB at 42.)

Likewise, the Galaxy S II (SGH-I777) also gives an impression of simplicity and balance. Both the claimed design of the D’678 patent and the Galaxy S II (SGH-I777) design include a single continuous piece of transparent material that is rectangular in overall shape with rounded corners. (*Compare* JX-0002 with CPX-0057; *see also* RDX-37-40). In addition, for both the claimed design of the D’678 patent and the Galaxy S II (SGH-I777), the transparent material is flat and extends edge-to-edge across the entire front surface. (*Id.*; *see also* RDX-37-41, RDX-37-42.) Also, for both the claimed design of the D’678 patent and the Galaxy S II (SGH-I777) visible in this transparent material is a rectangular element surrounded by narrow balanced borders on the lateral sides and wider balanced borders above and below. (*Compare* JX-0002 with CPX-0057; *see also* RDX-37-40.) Finally, for both the claimed design of the D’678 patent and the Galaxy S II (SGH-I777) there is a lozenge-shaped element horizontally centered in the area above the rectangular element. (*Id.*).

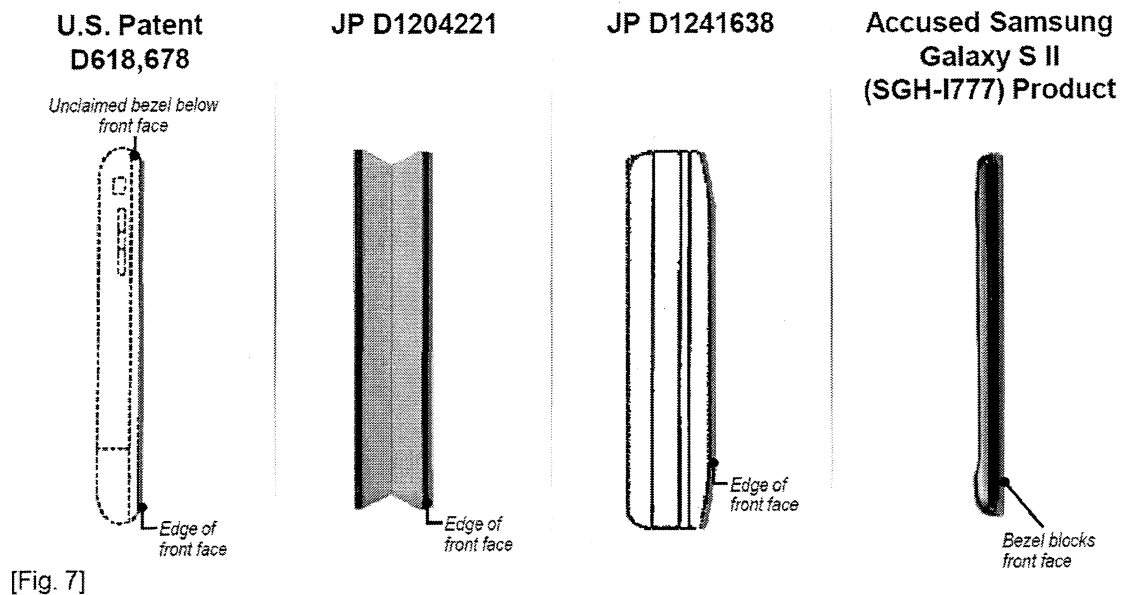
I find the minor differences highlighted by Samsung unpersuasive. Samsung argues the curvature radius of the rounded top corners appears different than the curvature radius of the bottom corners on the front face of the Galaxy S II (SGH-I777), and the curvatures are different from the evenly rounded corners of the D’678 patent. I find these differences are so slight and the impact on the overall impression of the phone so negligible that they would not demonstrate a substantial difference in the overall impression of the Galaxy S II (SGH-I777) to an ordinary observer. (*See* CPX-0057.) Samsung also argues the writing above and below the display and four elements near the bottom of the front face, including graphical icons to denote touch

sensitive areas of the display screen, distinguishes the Galaxy S II (SGH-I777) from the D'678 design. I find the icons blend into the background of the display due to their size and coloring and thus do not prevent finding the Galaxy S II (SGH-I777) and the D'678 design substantially similar. (*Id.*) Thus, I do not find that any differences between the Galaxy S II (SGH-I777) and the claimed design of the D'678 patent alter the similarity between the overall impressions of the designs for an ordinary observer.





(RDX-37-41)



(RDX-37-42)

Accordingly, I find that an ordinary observer would conclude that the overall visual impression of the Galaxy S II (SGH-I777) is substantially similar to the overall visual impression of the design claimed in the D'678 Patent when considered in light of the prior art.

#### 4. The Galaxy SII Epic 4G Touch

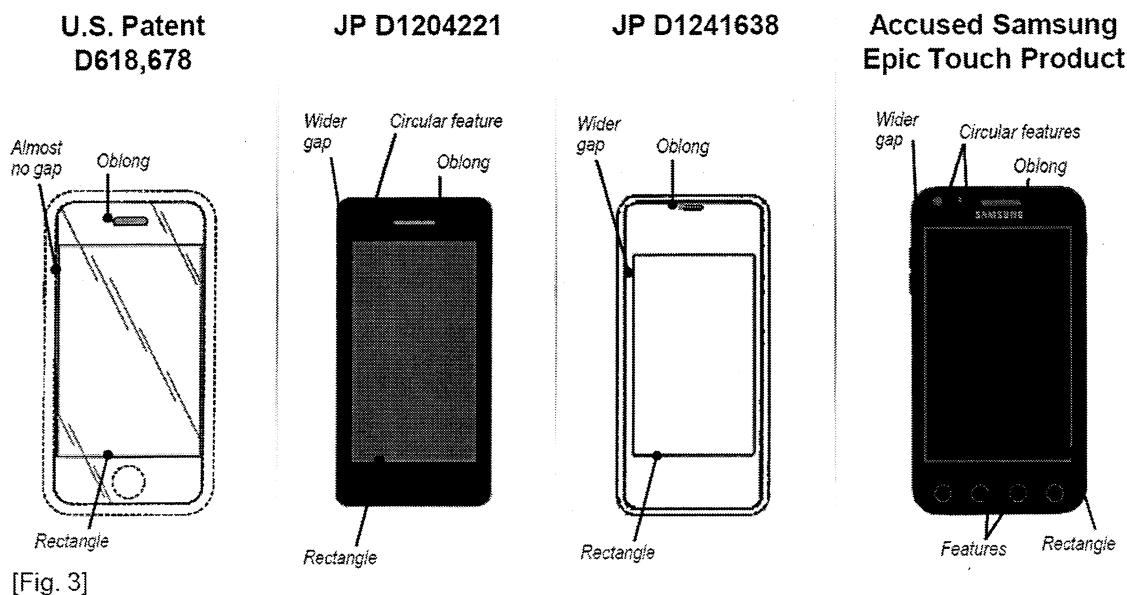
When comparing the claimed design of the D'678 patent to the **physical** exhibits of the Galaxy SII Epic 4G Touch (CPX-0040), in light of the prior art, the overall impression of the Galaxy SII Epic 4G Touch is substantially similar to the overall impression of the claimed design of the D'678 patent. The substantial similarity of the impressions is exemplified by figures RDX-37-46, RDX-37-47, and RDX-37-48 below. The D'678 patent evinces a simplistic and minimalistic design described by Apple in their post hearing brief as reflecting “the ‘fundamental idea’ of the original iPhone in the form of a flat transparent surface with specific surface geometries . . . Apple created in the iPhone an iconic image of a “dark, oily pond from which a display would magically appear when touched, permitting the user to interact with it.” (CIB at 42.)

Likewise, the Galaxy SII Epic 4G Touch also gives an impression of simplicity and balance. Both the claimed design of the D'678 patent and the Galaxy SII Epic 4G Touch design include a single continuous piece of transparent material that is rectangular in overall shape with rounded corners. (*Compare* JX-0002 with CPX-0040; *see also* RDX-37-46). In addition, for both the claimed design of the D'678 patent and the Galaxy SII Epic 4G Touch, the transparent material is flat and extends edge-to-edge across the entire front surface. (*Id.*; *see also* RDX-37-47, RDX-37-48.) Also, for both the claimed design of the D'678 patent and the Galaxy SII Epic 4G Touch a rectangular element surrounded by narrow balanced borders on the lateral sides and wider balanced borders above and below is visible in this transparent material. (*Compare* JX-0002 with CPX-0040; *see also* RDX-37-46.) Finally, for both the claimed design of the D'678 patent and the Galaxy SII Epic 4G Touch there is a lozenge-shaped element horizontally

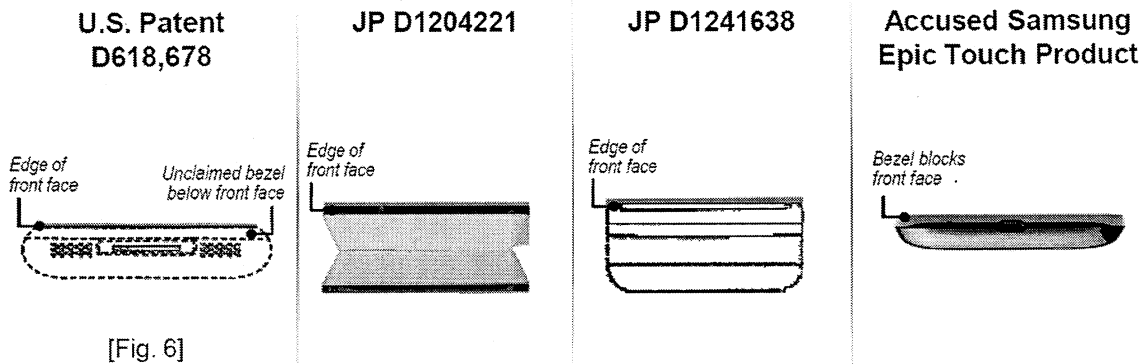
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centered in the area above the rectangular element. (*Id.*). Based on the effect and placement of all the major design elements, the claimed design of the D'678 patent and the Galaxy SII Epic 4G Touch create the same distinctive overall look which an ordinary observer familiar with the prior art would find substantially similar.

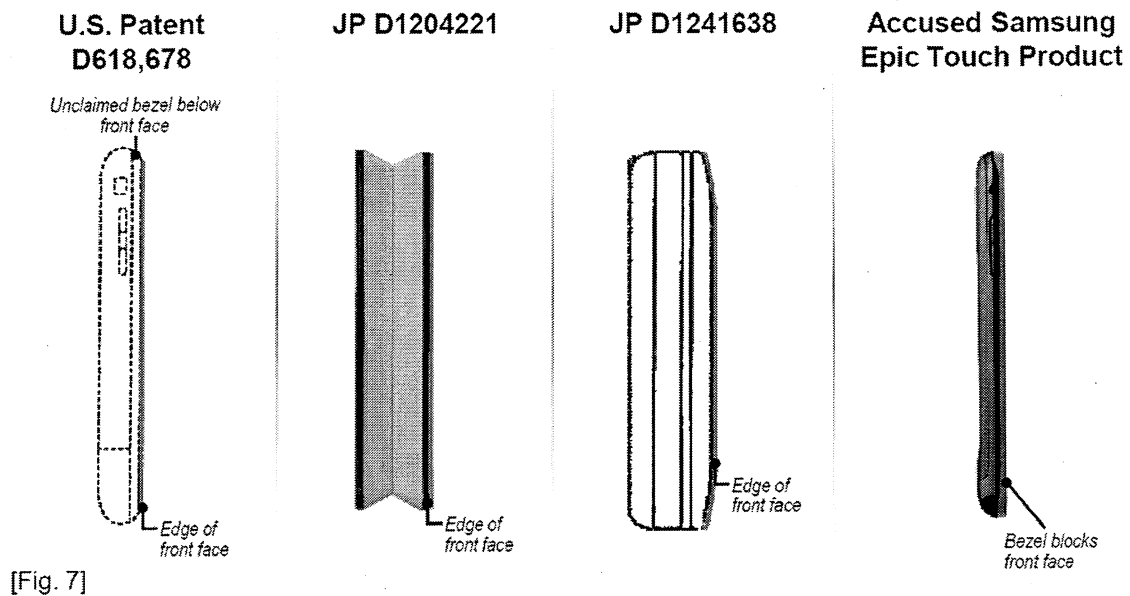
I find the minor differences highlighted by Samsung unpersuasive. Samsung argues the writing above and below the display and four elements near the bottom of the front face, including graphical icons to denote touch sensitive areas of the display screen, distinguishes the Galaxy SII Epic 4G Touch from the D'678 design. I find the icons blend into the background of the display due to their size and coloring and thus do not prevent finding the Galaxy SII Epic 4G Touch and the D'678 design substantially similar. (CPX-0040; *see also* RDX-37-46). Thus, I do not find that any differences between the Galaxy SII Epic 4G Touch and the claimed design of the D'678 patent alter the similarity between the overall impressions of the designs for an ordinary observer.



(RDX-37-46)



(RDX-37-47)



(RDX-37-48)

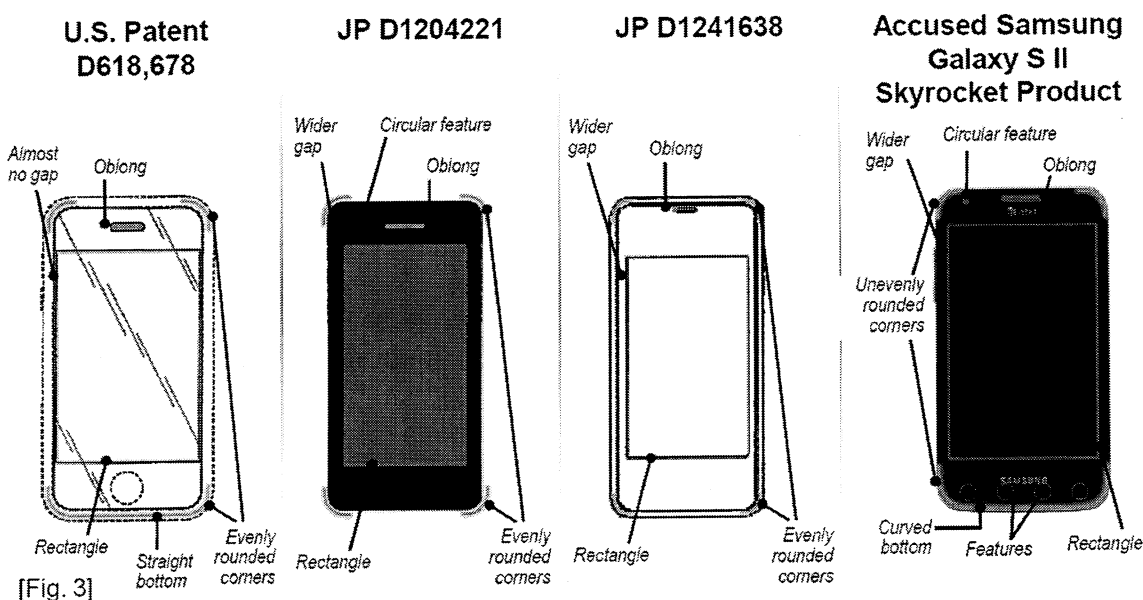
Accordingly, I find that an ordinary observer would conclude that the overall visual impression of the Galaxy SII Epic 4G Touch is substantially the same as the overall visual impression of the design claimed in the D'678 Patent when considered in light of the prior art.

## 5. The Galaxy SII Skyrocket

When comparing the claimed design of the D'678 patent to the **physical** exhibits of the Galaxy SII Skyrocket (CPX-0059), in light of the prior art, the overall impression of the Galaxy SII Skyrocket is substantially similar to the overall impression of the claimed design of the D'678 patent. The substantial similarity of the impressions is exemplified by figures RDX-37-49, RDX-37-50, and RDX-37-51 below. The D'678 patent evinces a simplistic and minimalistic design described by Apple in their post hearing brief as reflecting “the ‘fundamental idea’ of the original iPhone in the form of a flat transparent surface with specific surface geometries . . . Apple created in the iPhone an iconic image of a “dark, oily pond from which a display would magically appear when touched, permitting the user to interact with it.” (CIB at 42.)

Likewise, the Galaxy SII Skyrocket also gives an impression of simplicity and balance. Both the claimed design of the D'678 patent and the Galaxy SII Skyrocket design include a single continuous piece of transparent material that is rectangular in overall shape with rounded corners. (*Compare* JX-0002 *with* CPX-0059; *see also* RDX-37-49). In addition, for both the claimed design of the D'678 patent and the Galaxy SII Skyrocket, the transparent material is flat and extends edge-to-edge across the entire front surface. (*Id.*; *see also* RDX-37-50, RDX-37-51.) Also, for both the claimed design of the D'678 patent and the Galaxy SII Skyrocket a rectangular element surrounded by narrow balanced borders on the lateral sides and wider balanced borders above and below is visible in this transparent material. (*Compare* JX-0002 *with* CPX-0059; *see also* RDX-37-49.) Finally, for both the claimed design of the D'678 patent and the Galaxy SII Skyrocket there is a lozenge-shaped element horizontally centered in the area above the rectangular element. (*Id.*).

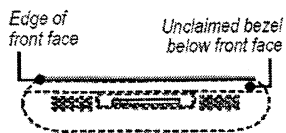
I find the minor differences highlighted by Samsung unpersuasive. Samsung argues the curvature radius of the rounded top corners appears different than the curvature radius of the bottom corners on the front face of the Galaxy SII Skyrocket, and the curvatures are different from the evenly rounded corners of the D'678 patent. (See CPX-0059.) I find these differences are so slight and the impact on the overall impression of the phone so negligible that they would not demonstrate a substantial difference in the overall impression of the Galaxy SII Skyrocket to an ordinary observer. (See CPX-0059.) Samsung also argues the writing above and below the display and four elements near the bottom of the front face, including graphical icons to denote touch sensitive areas of the display screen, distinguishes the Galaxy SII Skyrocket from the D'678 design. I find the icons blend into the background of the display due to their size and coloring and thus do not prevent finding the Galaxy SII Skyrocket and the D'678 design substantially similar. (*Id.*) Thus, I do not find that any differences between the Galaxy SII Skyrocket and the claimed design of the D'678 patent alter the similarity between the overall impressions of the designs for an ordinary observer.





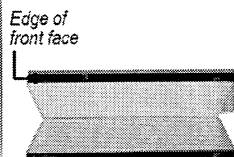
(RDX-37-49)

U.S. Patent  
D618,678

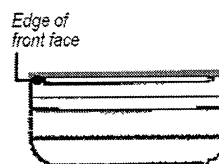


[Fig. 6]

JP D1204221



JP D1241638

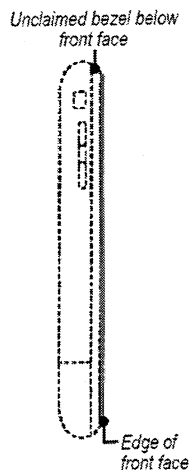


Accused Samsung  
Galaxy S II  
Skyrocket Product



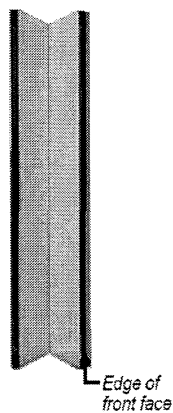
(RDX-37-50)

U.S. Patent  
D618,678

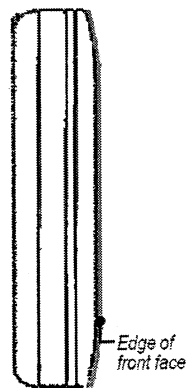


[Fig. 7]

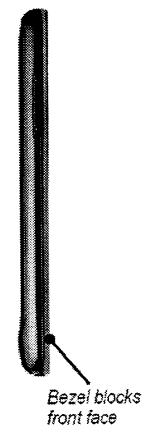
JP D1204221



JP D1241638



Accused Samsung  
Galaxy S II  
Skyrocket Product



(RDX-37-51)

Accordingly, I find that an ordinary observer would conclude that the overall visual impression of the Galaxy SII Skyrocket is substantially the same as the overall visual impression of the design claimed in the D'678 Patent when considered in light of the prior art.

## 6. The Mesmerize/Showcase/Fascinate

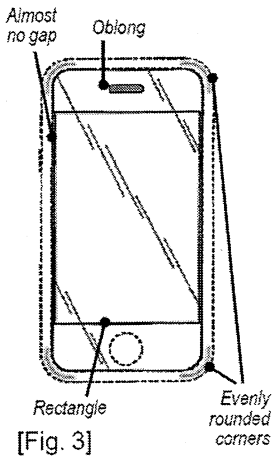
When comparing the claimed design of the D'678 patent to the **physical** exhibits of the Mesmerize (CPX-0090), Showcase (CPX-0124) and Fascinate (CPX-0044) in light of the prior art, the overall impression of the Mesmerize, Showcase and Fascinate is substantially similar to the overall impression of the claimed design of the D'678 patent. The substantial similarity of the impressions is exemplified by figures RDX-37-52, RDX-37-53, and RDX-37-54 below. The D'678 patent evinces a simplistic and minimalistic design described by Apple in their post hearing brief as reflecting “the ‘fundamental idea’ of the original iPhone in the form of a flat transparent surface with specific surface geometries . . . Apple created in the iPhone an iconic image of a “dark, oily pond from which a display would magically appear when touched, permitting the user to interact with it.” (CIB at 42.)

Likewise, the Mesmerize, Showcase and Fascinate also give an impression of simplicity and balance. Both the claimed design of the D'678 patent and the designs of the Mesmerize/Showcase/Fascinate include a single continuous piece of transparent material that is rectangular in overall shape with rounded corners. (*Compare* JX-0002 with CPX-0090, CPX-0124, CPX-0044; *see also* RDX-37-52). In addition, for both the claimed design of the D'678 patent and the Mesmerize/Showcase/Fascinate, the transparent material is flat and extends edge-to-edge across the entire front surface. (*Id.*; *see also* RDX-37-53, RDX-37-54.) Also, for both the claimed design of the D'678 patent and the Mesmerize/Showcase/Fascinate, a rectangular element surrounded by narrow balanced borders on the lateral sides and wider balanced borders above and below is visible in this transparent material. (*Compare* JX-0002 with CPX-0090, CPX-0124, CPX-0044; *see also* RDX-37-52.) Finally, for both the claimed design of the D'678

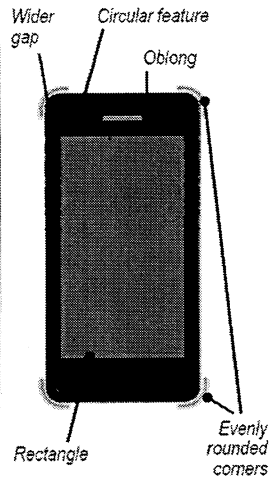
patent and the Mesmerize/Showcase/Fascinate there is a lozenge-shaped element horizontally centered in the area above the rectangular element. (*Id.*).

I find the minor differences highlighted by Samsung unpersuasive. Samsung argues the curvature radius of the rounded top corners appears different than the curvature radius of the bottom corners on the front face of the Mesmerize/Showcase/Fascinate, and the curvatures are different from the evenly rounded corners of the D'678 patent. (*See* CPX-0090, CPX-0124, CPX-0044.) I find these differences are so slight and the impact on the overall impression of the phone so negligible that they would not demonstrate a substantial difference in the overall impression of the Mesmerize/Showcase/Fascinate to an ordinary observer. (*Id.*) Samsung also argues the writing above and below the display and four elements near the bottom of the front face, including graphical icons to denote touch sensitive areas of the display screen, distinguishes the Mesmerize/Showcase/Fascinate from the D'678 design. I find the icons blend into the background of the display due to their size and coloring and thus do not prevent finding the Mesmerize/Showcase/Fascinate and the D'678 design substantially similar. (*Id.*) Thus, I do not find that any differences between the Mesmerize/Showcase/Fascinate and the claimed design of the D'678 patent alter the similarity between the overall impressions of the designs for an ordinary observer.

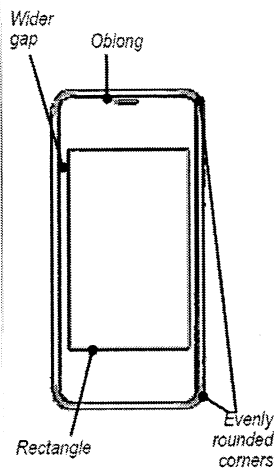
U.S. Patent  
D618,678



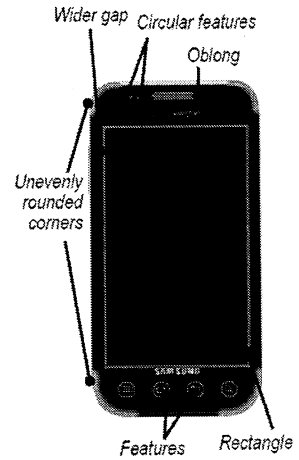
JP D1204221



JP D1241638

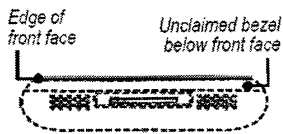


Accused Samsung  
Mesmerize/Showcase/  
Fascinate Product



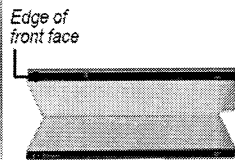
(RDX-37-52)

U.S. Patent  
D618,678

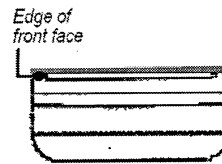


[Fig. 6]

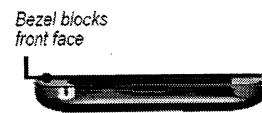
JP D1204221



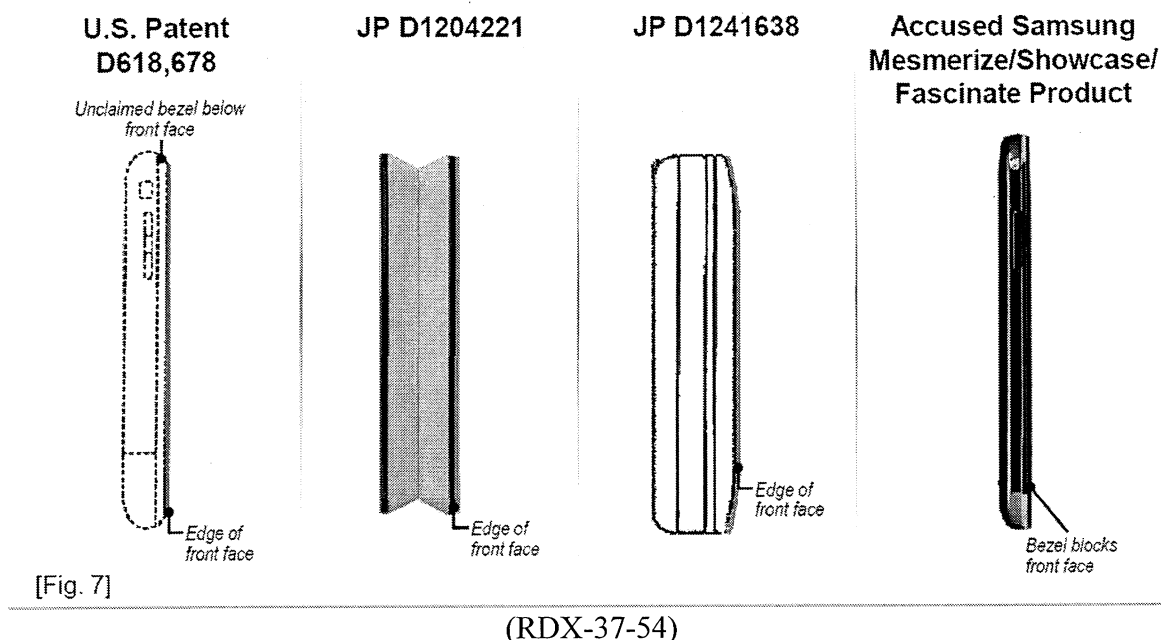
JP D1241638



Accused Samsung  
Mesmerize/Showcase/  
Fascinate Product



(RDX-37-53)



Accordingly, I find that an ordinary observer would conclude that the overall visual impression of the Mesmerize/Showcase/Fascinate is substantially the same as the overall visual impression of the design claimed in the D'678 patent when considered in light of the prior art.

## 7. The Infuse 4G

When comparing the claimed design of the D'678 patent to the **physical** exhibits of the Infuse 4G (CPX-0083) in light of the prior art, the overall impression of the Infuse 4G is substantially similar to the claimed design of the D'678 patent. The substantial similarity of the impressions is exemplified by figures RDX-37-55, RDX-37-56, and RDX-37-57 below. The D'678 patent evinces a simplistic and minimalistic design described by Apple in their post hearing brief as reflecting "the 'fundamental idea' of the original iPhone in the form of a flat transparent surface with specific surface geometries. . . . Apple created in the iPhone an iconic

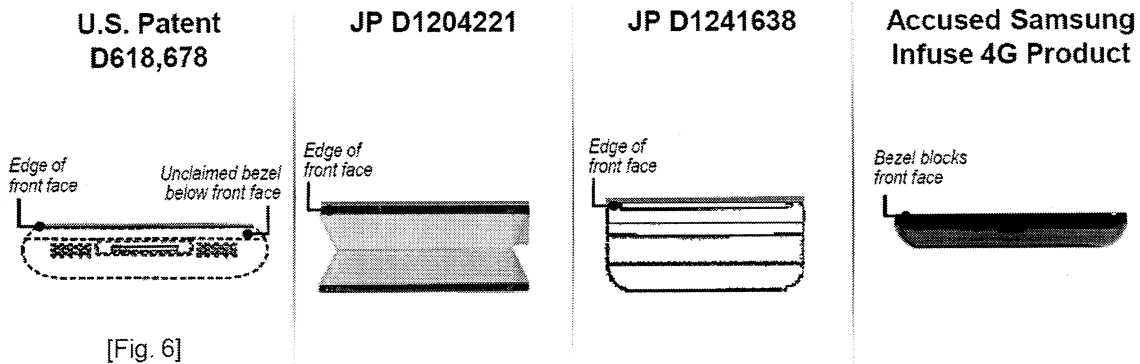
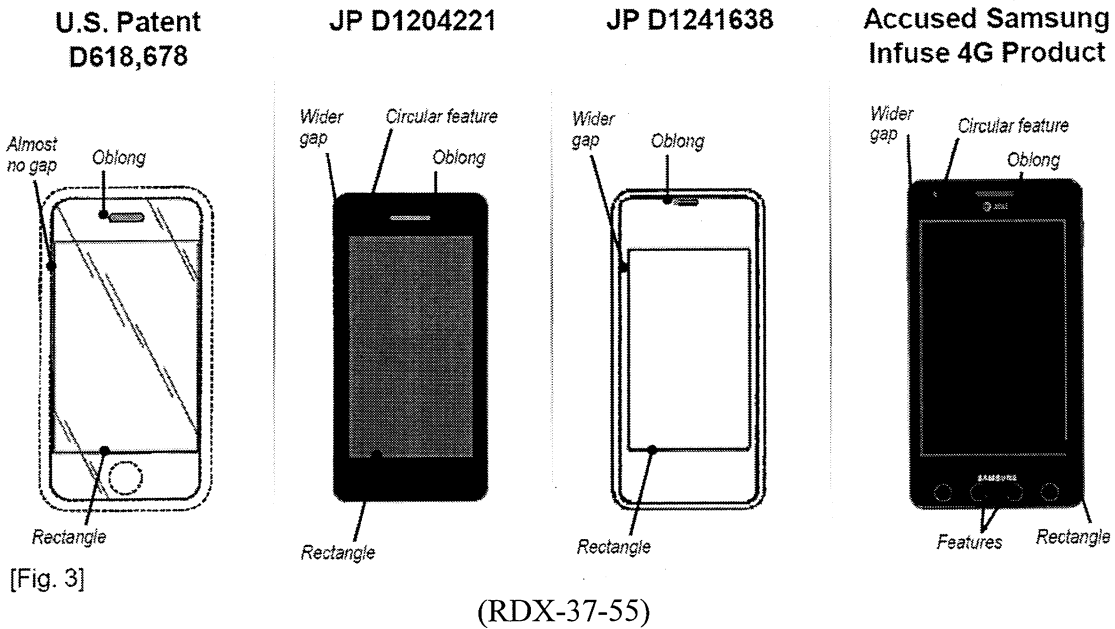
image of a “dark, oily pond from which a display would magically appear when touched, permitting the user to interact with it.” (CIB at 42.)

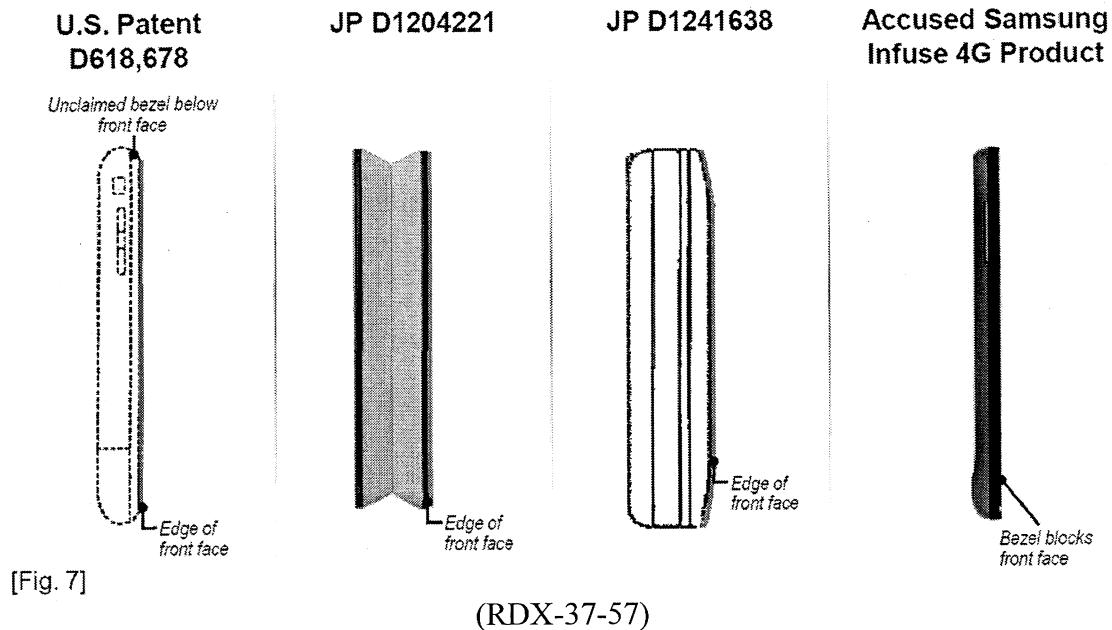
Likewise, the Infuse 4G also gives an impression of simplicity and balance. Both the claimed design of the D’678 patent and the Infuse 4G design include a single continuous piece of transparent material that is rectangular in overall shape with rounded corners. (*Compare* JX-0002 *with* CPX-0083; *see also* RDX-37-55). In addition, for both the claimed design of the D’678 patent and the Infuse 4G, the transparent material is flat and extends edge-to-edge across the entire front surface. (*Id.*; *see also* RDX-37-56, RDX-37-57.) Also, for both the claimed design of the D’678 patent and the Infuse 4G, a rectangular element surrounded by narrow balanced borders on the lateral sides and wider balanced borders above and below is visible in this transparent material. (*Compare* JX-0002 *with* CPX-0083; *see also* RDX-37-55.) Finally, for both the claimed design of the D’678 patent and the Infuse 4G there is a lozenge-shaped element horizontally centered in the area above the rectangular element. (*Id.*).

I find the minor differences highlighted by Samsung unpersuasive. Samsung argues the curvature radius of the rounded top corners appears different than the curvature radius of the bottom corners on the front face of the Infuse 4G, and the curvatures are different from the evenly rounded corners of the D’678 patent. (*See* CPX-0083.) I find these differences are so slight and the impact on the overall impression of the phone so negligible that they would not demonstrate a substantial difference in the overall impression of the Infuse 4G to an ordinary observer. (*Id.*) Samsung also argues the writing above and below the display and four elements near the bottom of the front face, including graphical icons to denote touch sensitive areas of the display screen, distinguishes the Infuse 4G from the D’678 design. I find the icons blend into the

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background of the display due to their size and coloring and thus do not prevent finding the Infuse 4G and the D'678 design substantially similar. (*Id.*) Thus, I do not find that any differences between the Infuse 4G and the claimed design of the D'678 patent alter the similarity between the overall impressions of the designs for an ordinary observer.





Accordingly, I find that an ordinary observer would conclude that the overall visual impression of the Infuse 4G is substantially the same as the overall visual impression of the design claimed in the D'678 Patent when considered in light of the prior art.

## 8. The Focus S

When comparing the claimed design of the D'678 patent to the **physical** exhibits of the Focus S (CPX-0048) in light of the prior art, the overall impression of the Focus S is substantially similar to the claimed design of the D'678 patent. The substantial similarity of the impressions is exemplified by figures RDX-37-58, RDX-37-59, and RDX-37-60 below. The D'678 patent evinces a simplistic and minimalistic design described by Apple in their post hearing brief as reflecting "the 'fundamental idea' of the original iPhone in the form of a flat transparent surface with specific surface geometries . . . Apple created in the iPhone an iconic image of a "dark, oily pond from which a display would magically appear when touched, permitting the user to interact with it." (CIB at 42.)



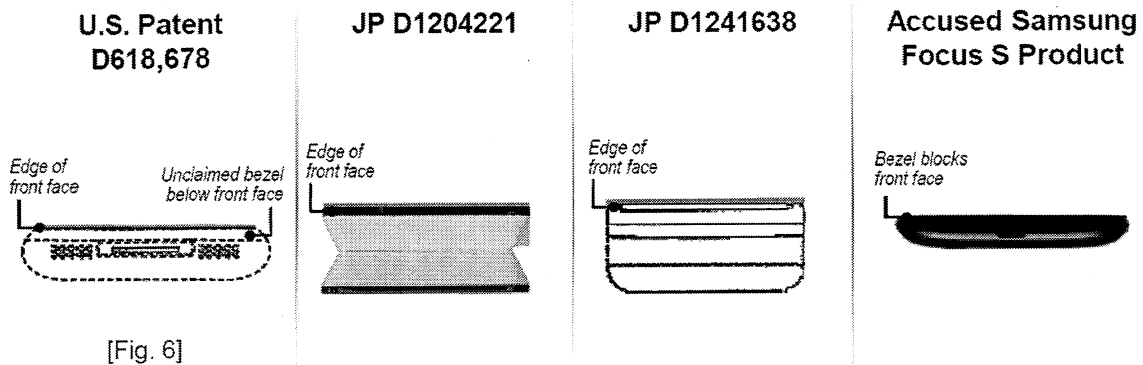
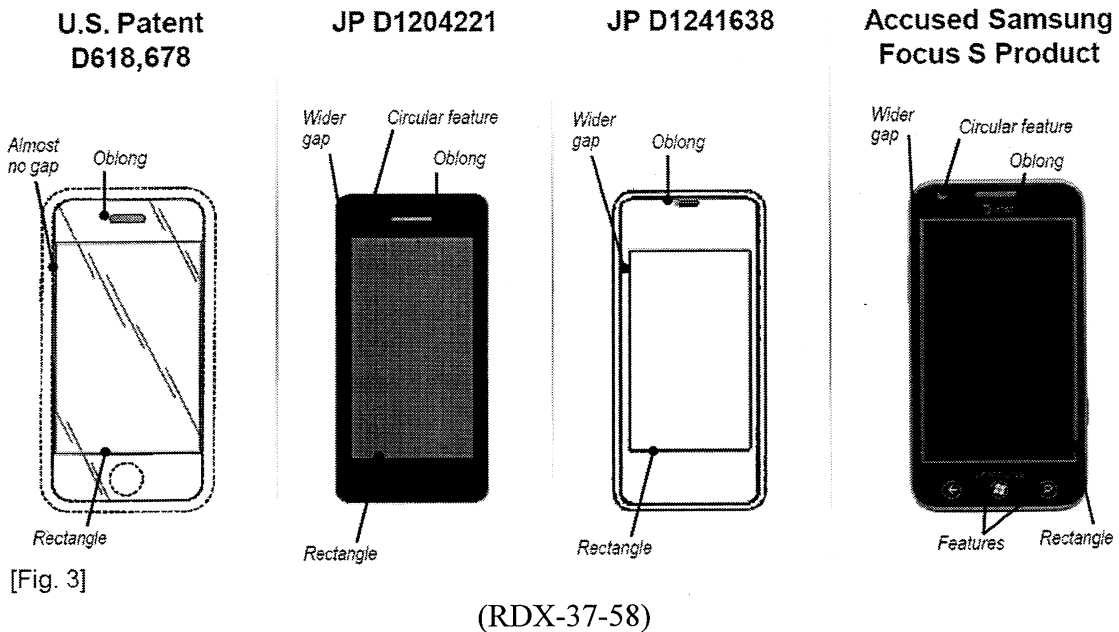
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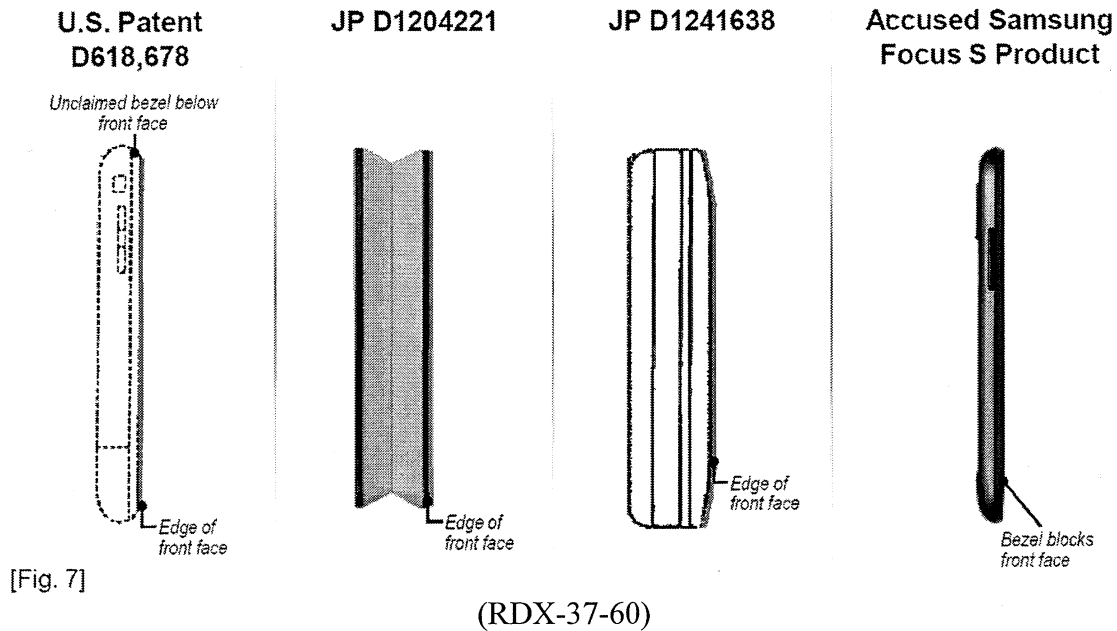
Likewise, the Focus S also gives an impression of simplicity and balance. Both the claimed design of the D'678 patent and the Focus S design include a single continuous piece of transparent material that is rectangular in overall shape with rounded corners. (*Compare* JX-0002 *with* CPX-0048; *see also* RDX-37-58). In addition, for both the claimed design of the D'678 patent and the Focus S, the transparent material is flat and extends edge-to-edge across the entire front surface. (*Id.*; *see also* RDX-37-59, RDX-37-60.) Also, for both the claimed design of the D'678 patent and the Focus S, a rectangular element surrounded by narrow balanced borders on the lateral sides and wider balanced borders above and below is visible in this transparent material. (*Compare* JX-0002 *with* CPX-0048; *see also* RDX-37-58.) Finally, for both the claimed design of the D'678 patent and the Focus S there is a lozenge-shaped element horizontally centered in the area above the rectangular element. (*Id.*). Based on the effect and placement of all the major design elements, the claimed design of the D'678 patent and Focus S create the same distinctive overall look which an ordinary observer familiar with the prior art would find substantially similar.

I find the minor differences highlighted by Samsung unpersuasive. Samsung argues the curvature radius of the rounded top corners appears different than the curvature radius of the bottom corners on the front face of the Focus S, and the curvatures are different from the evenly rounded corners of the D'678 patent. (*See* CPX-0048.) I find these differences are so slight and the impact on the overall impression of the phone so negligible that they would not demonstrate a substantial difference in the overall impression of the Focus S to an ordinary observer. (*Id.*) Samsung also argues the writing above and below the display and four elements near the bottom of the front face, including graphical icons to denote touch sensitive areas of the display screen,

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distinguishes the Focus S from the D'678 design. I find the icons blend into the background of the display due to their size and coloring and thus do not prevent finding the Focus S and the D'678 design substantially similar. (*Id.*) Thus, I do not find that any differences between the Focus S and the claimed design of the D'678 patent alter the similarity between the overall impressions of the designs for an ordinary observer.





Accordingly, I find that an ordinary observer would conclude that the overall visual impression of the Focus S is substantially the same as the overall visual impression of the design claimed in the D'678 patent when considered in light of the prior art.

## 9. The Galaxy Player 4.0

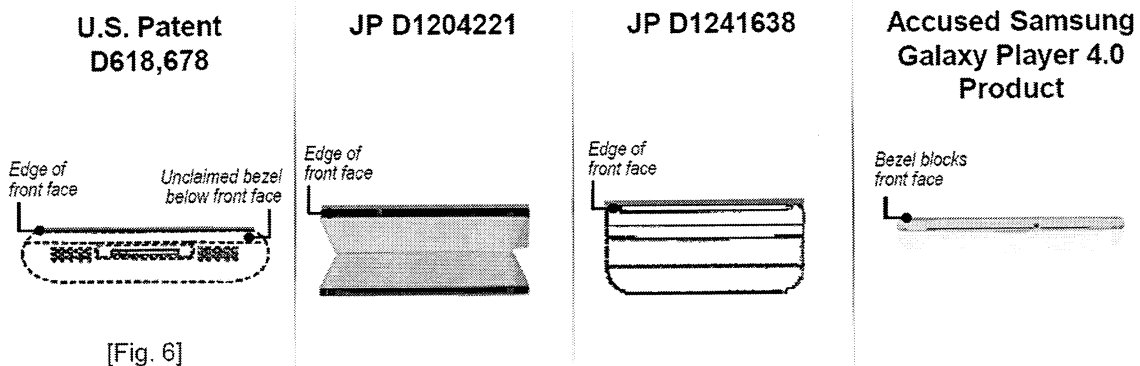
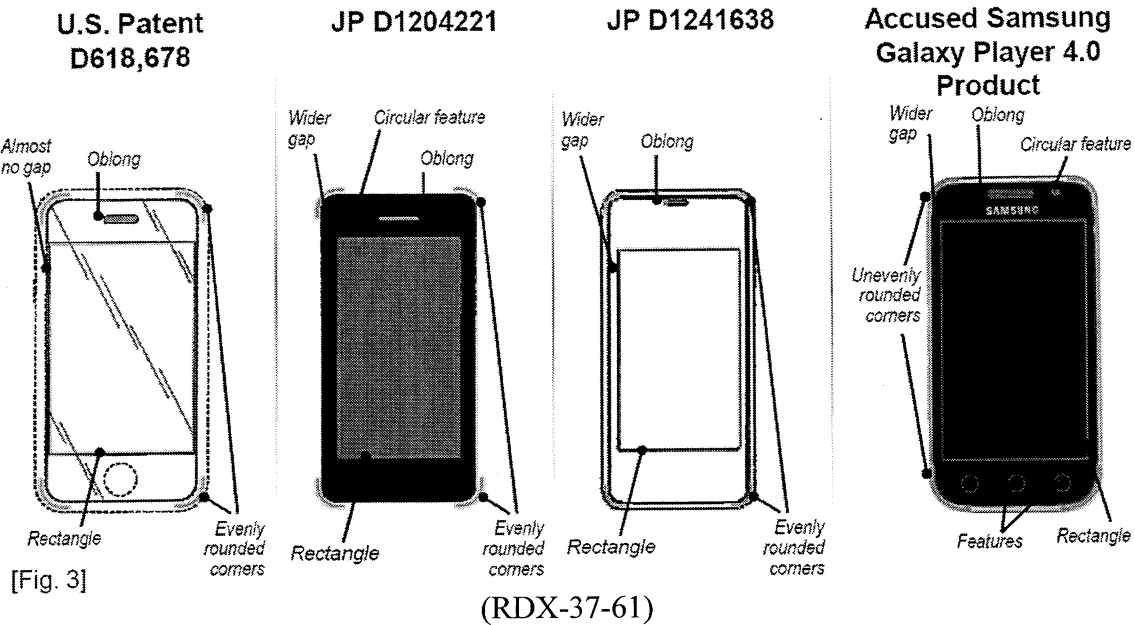
When comparing the claimed design of the D'678 patent to the **physical** exhibits of the Galaxy Player 4.0 (CPX-0053) in light of the prior art, the overall impression of the Galaxy Player 4.0 is substantially similar to the overall impression of the claimed design of the D'678 patent. The substantial similarity of the impressions is exemplified by figures RDX-37-61, RDX-37-62, and RDX-37-63 below. The D'678 patent evinces a simplistic and minimalistic design described by Apple in their post hearing brief as reflecting "the 'fundamental idea' of the original iPhone in the form of a flat transparent surface with specific surface geometries . . . Apple created in the iPhone an iconic image of a "dark, oily pond from which a display would magically appear when touched, permitting the user to interact with it." (CIB at 42.)

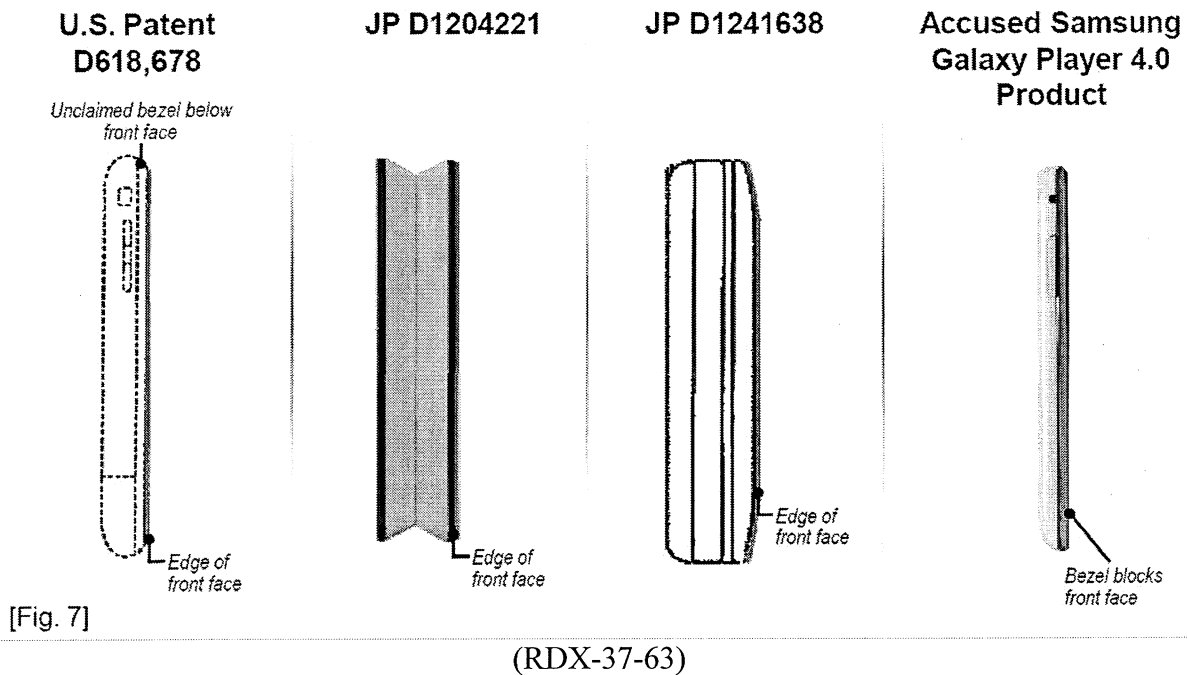
Likewise, the Galaxy Player 4.0 also gives an impression of simplicity and balance. Both the claimed design of the D'678 patent and the Galaxy Player 4.0 design include a single continuous piece of transparent material that is rectangular in overall shape with rounded corners. (*Compare* JX-0002 with CPX-0053; *see also* RDX-37-61). In addition, for both the claimed design of the D'678 patent and the Galaxy Player 4.0, the transparent material is flat and extends edge-to-edge across the entire front surface. (*Id.*; *see also* RDX-37-62, RDX-37-63.) Also, for both the claimed design of the D'678 patent and the Galaxy Player 4.0, a rectangular element surrounded by narrow balanced borders on the lateral sides and wider balanced borders above and below is visible in this transparent material. (*Compare* JX-0002 with CPX-0053; *see also* RDX-37-61.) Finally, for both the claimed design of the D'678 patent and the Galaxy Player 4.0 there is a lozenge-shaped element horizontally centered in the area above the rectangular element. (*Id.*).

I find the minor differences highlighted by Samsung unpersuasive. Samsung argues the curvature radius of the rounded top corners appears different than the curvature radius of the bottom corners on the front face of the Galaxy Player 4.0, and the curvatures are different from the evenly rounded corners of the D'678 patent. (*See* CPX-0053.) I find these differences are so slight and the impact on the overall impression of the phone so negligible that they would not demonstrate a substantial difference in the overall impression of the Galaxy Player 4.0 to an ordinary observer. (*Id.*) Samsung also argues the writing above and below the display and four elements near the bottom of the front face, including graphical icons to denote touch sensitive areas of the display screen, distinguishes the Galaxy Player 4.0 from the D'678 design. I find the icons blend into the background of the display due to their size and coloring and thus do not

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prevent finding the Galaxy Player 4.0 and the D'678 design substantially similar. (*Id.*) Thus, I do not find that any differences between the Galaxy Player 4.0 and the claimed design of the D'678 patent alter the similarity between the overall impressions of the designs for an ordinary observer.





Accordingly, I find that an ordinary observer would conclude that the overall visual impression of the Galaxy Player 4.0 is substantially the same as the overall visual impression of the design claimed in the D'678 Patent when considered in light of each piece of prior art.

#### **F. Validity of the D'678 Patent**

##### **1. Obviousness under 35 U.S.C. § 103**

##### **c. Japanese Design Patent JP D1241638**

Samsung argues the JP638 shares the same overall configuration as the D'678 design except for the arched nature of the front face. (RIB at 103.) Samsung argues that if the D'678 patent is construed broadly, JP638 renders it obvious through minor variations or in combination with other prior art references. (*Id.*) Samsung argues that several prior art references taught the D'678 patents placement of an oblong shape that was vertically/horizontally centered in the upper border to enhance mobile phone use and functionality. (*Id.*) Samsung asserts that other electronic device designs created before Apple filed its application for the D'678 patent had this

variation and that this evinces that the design was obvious to designers. (*Id.*) Samsung argues that the D'678 patent's modification of the placement and size of that oblong shape was therefore an obvious change based on other prior art. (*Id.* at 104.)

### **Analysis**

Samsung supports its obviousness contention with only attorney argument. (*See id.* at 103-104.) Samsung presents no supporting testimony. I find Samsung's argument without merit.

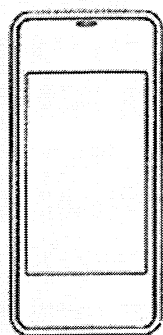
Samsung admits that "the arched nature of the front face" of the JP638 differs from the front face of the D'678 design, yet provides no explanation of how the JP638 either through "minor variations or in combination with other prior art references" renders the claimed design obvious. (*See id.*) The only argument that Samsung presents is an argument as to why it would have been obvious to vertically/horizontally center the oblong shape in the JP638. Samsung presents no argument discussing the convex front face of the JP836.

The ultimate inquiry into whether the claimed design of the D'678 patent would have been obvious is determined from the perspective of a designer of ordinary skill who designs articles of the type involved. *See Titan Tire Corp. v. Case New Holland, Inc.*, 566 F.3d 1372, 1375 (Fed. Cir. 2009) ("the ultimate inquiry ... is whether the claimed design would have been obvious to a designer of ordinary skill who designs articles of the type involved") (quoting *Durling v. Spectrum Furniture Co.*, 101 F.3d 100, 103 (Fed. Cir. 1996).) Samsung presents no testimony of a designer of ordinary skill and thus I find Samsung has failed to set forth a *prima facie* case of obviousness.

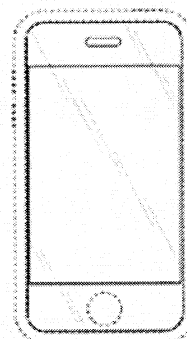
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Even if Samsung's obviousness argument was properly supported, Samsung's obviousness argument still fails as I find the differences between the JP836 design and the claimed design are so pronounced that the JP836 cannot constitute a primary reference.

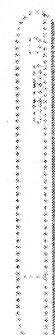
**JP'638 Patent**



**D'678 Patent**



**FIG. 3**



**FIG. 7**



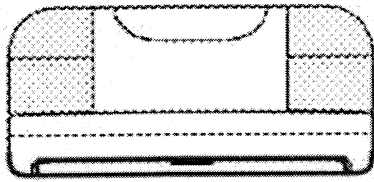


FIG. 5

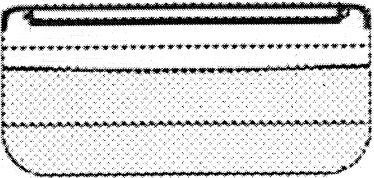


FIG. 6

In particular, as can be seen in the illustrations above, the front face of the D678 design appears perfectly flat, whereas the front face of the JP638 design is arched at the top and bottom areas outside of the interior rectangle feature. Thus, whereas the D'678 has a front face that is straight, the front face of the JP638 is convex. *Apple, Inc. v. Samsung Electronics Co., Ltd.*, 678 F.3d 1314, 1326 (Fed. Cir. 2012) (“When the claimed portion of the side view is taken into account, the differences between the arched, convex front of the ‘638 reference distinguish it from the perfectly flat front face of the D’087 patent.”) Also, the oblong shape on the JP638 is significantly skewed towards the top of the design in contrast to the D’678 design in which the oblong feature is centered both horizontally and vertically in the area above the interior rectangle feature.

Moreover, the design claimed in the D’678 patent has a transparent/reflective surface that extends over the entire front face of the device as shown by the oblique line shading. The JP638, on the other hand, does not include such lines, which suggests that the surface is not transparent

or reflective. Although it might be argued that the interior rectangle on the front face of the JP638 design must inherently be transparent or reflective because it is a display used for viewing, such an argument cannot apply to the area outside the interior rectangle. That is, there is nothing in the design of the JP638 that would dictate that the surfaces outside the interior rectangle have to be transparent or reflective. Thus, the transparent/reflective front surface of the D'678 design further adds to the dissimilarity between the JP63 design and the design claimed in the D'678 patent.

Accordingly, for the reasons above, I do not find that the JP638 qualifies as a primary reference and thus I find for this additional reason that Samsung has failed to set forth a *prima facie* case of obviousness. *Apple, Inc.*, 678 F.3d at 1332.

**d. LG Chocolate in combination with Korean Patent  
KR-30-0394921**

Samsung argues that the LG chocolate phone disclosed an electronic device of a generally rectangular shape with rounded corners and a transparent front face above and inset display. (RIB at 104.) Samsung argues that the front face of the LG chocolate also has an oblong shape above interior rectangles. (*Id.*) Samsung argues that although the proportions of the display and the oblong shapes compared to the whole body art different than those found on the D'678 patent, those differences would have been obvious to someone skilled in the art. (*Id.*) Samsung argues it would have been obvious to make such a modification to allow for a larger display screen as larger LCD displays became technologically available and the functionality of mobile devices expanded. (*Id.*) Samsung argues that Korean Patent KR-30-0394921 ("K921") discloses an overall rectangular shape with rounded corners, a transparent flat front face in an interior rectangle below the clear surface. (*Id.* at 105.) Samsung argues that the interior

rectangle is centered both horizontally and vertically and is surrounded by narrow borders on the two opposing sides with wider borders on the remaining sides. (*Id.*) Samsung argues that although the K921 does not have a noble and shape it wouldn't obvious to a designer to add a shape to correspond to any earpiece and rotate the orientation to modify the device for telephone use. (*Id.*)

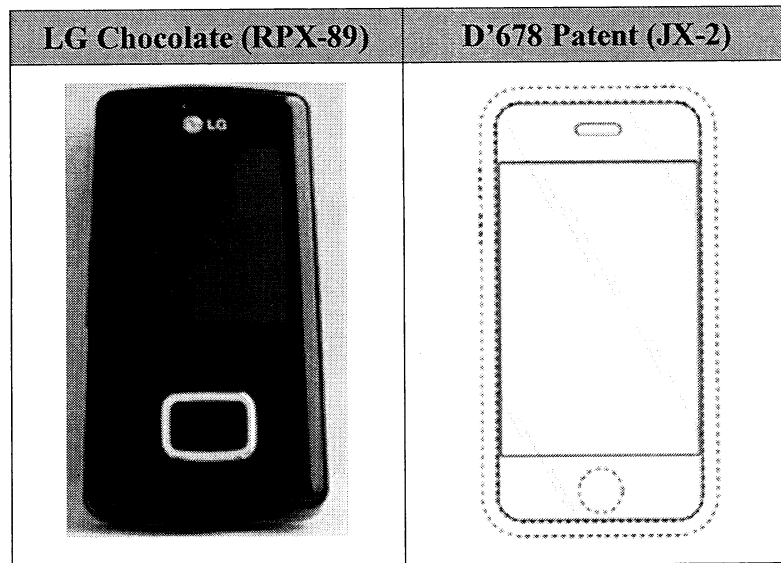
### **Analysis**

Samsung supports its obviousness contention with only attorney argument. (*See id.* at 104-105.) Samsung presents no supporting testimony. I find Samsung's argument without merit.

Samsung has the burden to prove invalidity by clear and convincing evidence, including that the references it seeks to combine are in the prior art. Samsung does not present any evidence in its brief that the LG Chocolate is prior art to the D'678 design. Nor does Samsung present any evidence that the K921 is prior art. Thus, I find Samsung has failed to set forth a *prima facie* case of obviousness.

However, even if the LG Chocolate was prior art, I do not find it to be similar enough to the claimed design to constitute a primary reference.

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As is plainly seen in the above illustrations, the LG Chocolate differs from the design of the D'678 patent such that major modifications would be needed to alter the LG Chocolate to give it a substantially similar impression to the D'678 patent. In particular, I find that with its prominent button feature on the front face, off-center display screen, and rounded top and bottom edges, among other elements, the LG Chocolate is not substantially the same design as the D'678 patent. Therefore, I do not find that the LG Chocolate qualifies as a primary reference and thus I find for this additional reason that Samsung has failed to set forth a *prima facie* case of obviousness. *Apple, Inc. v. Samsung Electronics Co., Ltd.*, 678 F.3d 1314, 1332 (Fed. Cir. 2012) (There can be no finding of obviousness “[i]n the absence of a qualifying primary reference.”)

Moreover, Samsung argues that “it would have been obvious to one of ordinary skill in designing electronic devices to add a shape to correspond to an earpiece and rotate the orientation to modify the device for telephone use.” However, Samsung presents no testimony from one of ordinary skill in the art. Attorney argument is not a substitute for actual evidence.

*See Johnston v. IVAC Corp.*, 885 F.2d 1574, 1581 (Fed.Cir.1989) (noting that “Attorneys’ argument is no substitute for evidence.”). Accordingly, for this reason too, I find Samsung has failed to prove by clear and convincing evidence that the design claimed in the D’678 patent is obvious in light of the LG Chocolate in combination with the K921.

## **2. D’678 Patent Invalid – New Matter**

Samsung argues that the D’678 is invalid due to the introduction of new matter in its application history. (RIB at 106.) Samsung argues that on February 23, 2009, when Apple filed the D’678 application, it submitted a design with oblique lines only in the interior rectangle. (*Id.*) Samsung argues that according to the MPEP oblique lines must be used to designate transparency or reflectivity. (*Id.*) Samsung argues that after receiving a rejection from the PTO on obviousness grounds, Apple submitted new drawings to replace those in the application and that the new drawings included oblique line shading across the entire surface, not just the interior rectangle. (*Id.* at 107.) Samsung argues that the new drawings were again rejected by the PTO on obviousness grounds. (*Id.* at 108.) Samsung asserts that in response to that rejection, Apple argued that its design was not obvious because it had “a substantially continuous transparent surface on an electronic device.” (*Id.*) Samsung argues that Apple could have only made such a response after its amendment, which Apple argued did not add new matter. (*Id.*) Samsung argues that the law is clear that no new matter can be added to a patent application. (*Id.*) Samsung argues that Apple’s positions in this investigation confirm that it made misrepresentations to the PTO. (*Id.* at 109.) Samsung argues that Apple should not benefit from its misrepresentations to the PTO. (*Id.*) Thus, Samsung argues the D’678 patent is invalid for

“inclusion of new matter in its application, especially in light of Apple’s misrepresentations.”

(*Id.*)

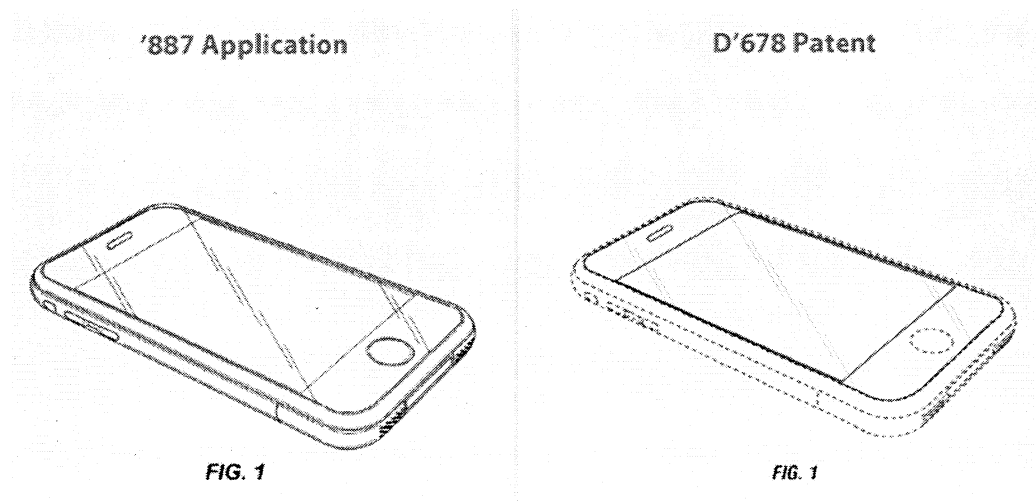
### Analysis

Samsung fails to raise this argument in its Pre-hearing brief and thus it is waived pursuant to Ground Rule 9.2. Even if it were not waived, Samsung’s argument is frivolous.

The front face of the D’678 patent explicitly states:

This application is a divisional application of U.S. Design Patent Application No. 29/282,831, which is a continuation application of U.S. Design Patent Application No. 29/270,887, filed January 5, 2007, now U.S. Design Patent No. D580,387, the disclosures of which are incorporated herein in their entirety by reference thereto.

JX-8 at 33. As is plainly seen in the figure below, the design disclosed in Application No. 29/270,887 (“the ‘887 application”) has the same oblique shading across the entire front surface of the device as the design disclosed in the D’678 patent.



Because the D’678 patent incorporated by reference the disclosure from the ‘887 application it cannot be said that the new drawings submitted during prosecution that extended the oblique

shading from the interior rectangle to the entire front surface of the device is new matter.

Accordingly, I also find Samsung wrong on the merits.

Moreover, it is unclear what the legal basis for Samsung's argument is. From Samsung's brief it appears Samsung could be arguing that I should invalidate the patent based on an alleged violation of 35 U.S.C. § 132 or 37 CFR § 1.121(f), but at the same time Samsung seems to argue that I should invalidate because of Apple's misrepresentations to the PTO. If Samsung is arguing the latter then it utterly failed to adduce any evidence of inequitable conduct by Apple that would support such an allegation.

**G. Domestic Industry - "Technical Prong"**

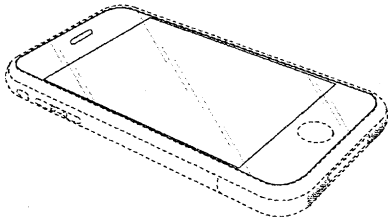
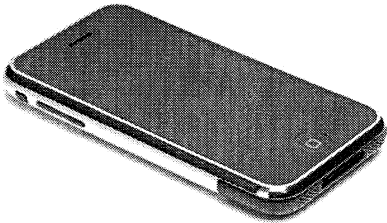
"[T]he technical prong requires proof that the patent claims cover the articles of manufacture that establish the domestic industry." *Crocs*, 598 F.3d at 1307. With respect to design patents, this requires applying *Gorham*'s ordinary observer test to compare the overall impressions of the design of Domestic Industry products and the asserted designs. *See id.* (finding the "overall effects of the design present in both the '789 patent and Crocs shoes" to be substantially the same in the eyes of the ordinary observer).

**Parties' Positions**

Apple contends it satisfies the technical prong because the claimed design of the D'678 patent and the design of its domestic industry products create substantially the same overall impression in the eyes of an ordinary observer. (CIB at 64.) Specifically, Apple contends every iPhone—original, 3G, 3GS, 4, and 4S—embodies the D'678 patent. (*Id.* at 72-77.) First Apple argues that all of the major visual elements of the D'678 patent appear in the original iPhone. Specifically, Apple contends that the iPhone's front surface is generally rectangular in shape

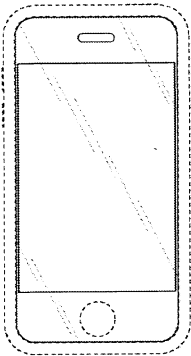
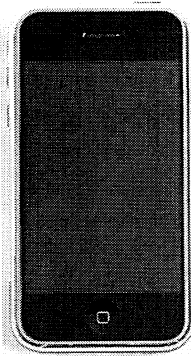
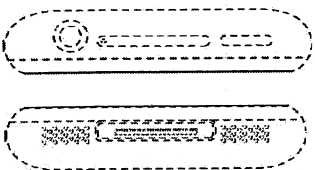
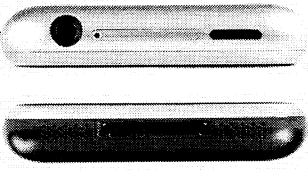
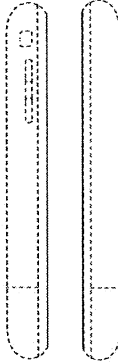
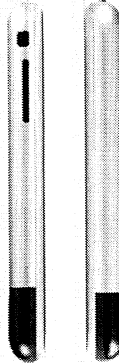
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with evenly curved corners, the flat front surface is comprised of a single piece of transparent material that extends edge-to-edge, and a single lozenge-shaped speaker slot is centered on the rectangular display with narrow balanced borders on the lateral sides and wider balanced borders above and below. (*Id.* at 72-73.)

D'678 Patent	iPhone (Original) (CPX-3)
	



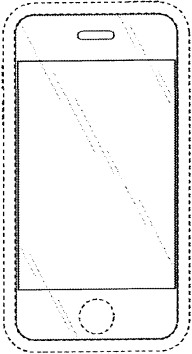
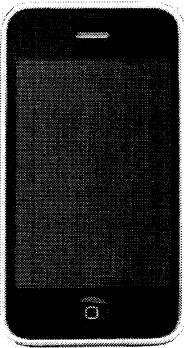
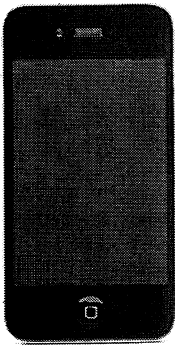
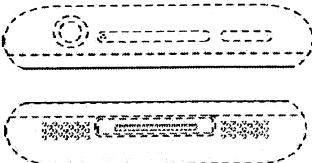
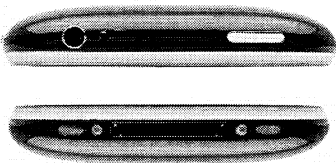
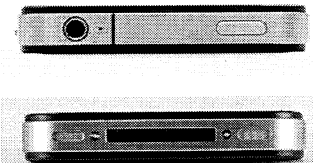
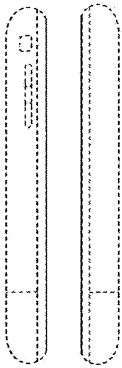
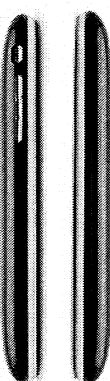
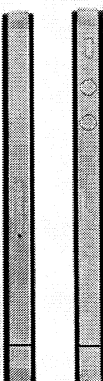
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D'678 Patent	iPhone (Original) (CPX-3)
	
	
	

Apple contends the iPhone 3G, 3GS, 4, and 4S front face designs are also substantially similar to the original iPhone and therefore also embody the D'678 patent. (CIB at 73-74.)

D'678 Patent	iPhone 3GS (CPX-5)	iPhone 4 (CPX-6)
		

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D'678 Patent	iPhone 3GS (CPX-5)	iPhone 4 (CPX-6)
		
		
		

Because Staff agrees with Apple's claim construction and analysis regarding the Domestic Industry products, the Staff believes that Apple has met its burden in establishing that the iPhone devices practice the claimed design of the D'678 patent. (SIB at 40-41.)

Samsung first contends that the iPhones do not practice the D'678 patent because the use of oblique parallel lines on the front surface of D'678 indicates that the surface is transparent or reflective and flat across the entire front face because none of the features shown on the front

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face interrupt the surface or change dimension. (RIB at 98-99.) Thus, Samsung contends the oblong feature, the interior rectangle, and the optional circular feature are under the flat transparent or reflective surface, or they are merely surface decorations because the patent does not show any of them as openings in the surface either by interrupting the oblique lines or by drawing them with contour lines or other shading techniques to indicate depth or dimension change. As none of the iPhones have a continuous flat surface without interruption or openings as shown in the D'678, Samsung contends that the Domestic Industry products do not practice the D'678 patent. (*Id.*)

Samsung also cites a number of differences between the Domestic Industry products and the D'678 patent, including a front surface that (i) has borders to the left and right of the interior rectangle that are extremely narrow, in the proportion and shape shown in the drawings of the D'678 patent, and which is homogeneous in appearance with the interior rectangle, (ii) has an oblong shape in the precise shape, proportion and positioning shown in the drawings of the D'678 patent that are homogenous with the rest of the front (including without change in texture, color or contrast), (iii) has no additional detail on the front surface, (including without interruptions, buttons or other details (such as a circular detail to the left or right of the oblong shape) other than an optional circular button on the lower part of the front surface, (iv) has an external rectangular shape with evenly rounded corners of the shape and proportion shown in the drawings of the D'678 patent, and (v) extends to the outside perimeter (including without any bezel or rim visible from the front). (RIB at 99.)

Samsung also contends that the claimed front face sits above the housing or bezel in the D'678 design. (RIB at 100). Samsung also contends that the Domestic Industry products do not

practice the D'678 patent because the patent does not claim the home screen button found on all Apple phones. (*Id.*) Samsung alleges that Apple also claimed that the button is “the only visible physical control on the front faces of these devices,” and that it is “not an ordinary button, but a distinctive design.” (*Id.*)

### **Analysis**

When comparing the D'678 patent to the physical exhibits of the iPhone original (CPX-0003), 3G (CPX-0004), 3GS (CPX-0005), 4 (CPX-0006), and 4S (CPX-0007) (collectively, “D'678 Domestic Industry products”), the overall impression of the D'678 patent is substantially similar to the D'678 Domestic Industry products. Both the D'678 patent and the Domestic Industry products give an impression of simplicity and minimalism. Both the claimed design of the D'678 patent and the D'678 Domestic Industry products include a single continuous piece of transparent material that is rectangular in overall shape with rounded corners. (*Compare* JX-0002 *with* CPX-0003, CPX-0004, CPX-0005, CPX-0006, CPX-0007). In addition, for both the claimed design of the D'678 patent and the D'678 Domestic Industry products, the transparent material is flat and extends edge-to-edge across the entire front surface. (*Id.*) Also, for both the claimed design of the D'678 patent and the D'678 Domestic Industry products, a rectangular element surrounded by narrow balanced borders on the lateral sides and wider balanced borders above and below is visible in this transparent material. (*Id.*) Finally, for both the claimed design of the D'678 patent and the D'678 Domestic Industry products there is a lozenge-shaped element horizontally centered in the area above the rectangular element. (*Id.*) Based on the effect and placement of all the major design elements, the claimed design of the D'678 patent and D'678

Domestic Industry products create the same distinctive overall look which an ordinary observer familiar with the prior art would find substantially similar.

I again find the minor differences highlighted by Samsung unpersuasive. Although there is a small variation between the width of the border elements of the D'678 patent and the D'678 Domestic Industry products, this difference is slight and would not demonstrate a significant difference to an ordinary observer. (*Compare* JX-0002 with CPX-0003, CPX-0004, CPX-0005, CPX-0006, CPX-0007). Furthermore, although the lozenge shaped feature on the D'678 Domestic Industry products is not completely flush with the rest of the front surface, the differences tend to blend into the background of the display due to their size and coloring and thus do not preclude finding the two designs substantially similar. (*Id.*) In addition, D'678 Domestic Industry products have a few unobtrusive features (such as a circular detail to the left or right of the oblong shape) which do not substantially alter the overall impression of the design.

Accordingly, I find that an ordinary observer would conclude that the overall visual impression of the D'678 Domestic Industry products is substantially the same as the overall visual impression of the design claimed in the D'678 Patent. I also find that any differences between the D'678 Domestic Industry products and the claimed design of the D'678 patent do not alter the similarity between the overall impressions of the designs for an ordinary observer.

## **VII. U.S. Patent No. 7,479,949**

### **A. Introduction**

U.S. Patent No. 7,479,949 (“the ‘949 patent”) is titled “Touch Screen Device, Method, and Graphical User Interface for Determining Commands by Applying Heuristics.” The patent issued on January 20, 2009, to Jobs, et al. and was assigned to Apple, Inc. (JX-003, cover page.)

The '949 patent is a continuation of U.S. patent application Ser. No. 11/850,635, "Touch Screen Device, Method, and Graphical User Interface for Determining Commands by Applying Heuristics," filed Sep. 5, 2007, which claims the benefit of U.S. Provisional Patent Application Nos. 60/937,991, "Touch Screen Device, Method, and Graphical User Interface for Determining Commands by Applying Heuristics," filed Jun. 29, 2007; 60/937,993, "Portable Multifunction Device," filed Jun. 29, 2007; 60/879,469, "Portable Multifunction Device," filed Jan. 8, 2007; 60/879,253, "Portable Multifunction Device," filed Jan. 7, 2007; and 60/824,769, "Portable Multifunction Device," filed Sep. 6, 2006. (JX-003 at 1:8-19.)

The '949 patent is directed to a computing device that performs precise movements of graphics in response to imprecise user gestures. The invention detects finger contacts on a touch screen display and applies "heuristics" to determine the appropriate command to execute based on a gesture from the finger contacts. (JX-003, Abstract.) For example, a web page may scroll one-dimensionally upward in the vertical direction in response to an imprecise substantially vertical upward swipe gesture performed by a user, but scroll two-dimensionally in response to an imprecise swipe gesture that is not within a predetermined angle (*e.g.*, 27°) of being perfectly vertical. (*Id.* at 64:17-33, 45-46.)

**B. Asserted Claims**

Apple argues that Samsung infringes claims 1, 4-6, and 10-20 of the '949 patent. The asserted claims read as follows:

1. A computing device, comprising:  
a touch screen display;  
one or more processors;

memory; and

one or more programs, wherein the one or more programs are stored in the memory and configured to be executed by the one or more processors, the one or more programs including:

instructions for detecting one or more finger contacts with the touch screen display;

instructions for applying one or more heuristics to the one or more finger contacts to determine a command for the device; and

instructions for processing the command;

wherein the one or more heuristics comprise:

a vertical screen scrolling heuristic for determining that the one or more finger contacts correspond to a one-dimensional vertical screen scrolling command rather than a two-dimensional screen translation command based on an angle of initial movement of a finger contact with respect to the touch screen display;

a two-dimensional screen translation heuristic for determining that the one or more finger contacts correspond to the two-dimensional screen translation command rather than the one-dimensional vertical screen scrolling command based on the angle of initial movement of the finger contact with respect to the touch screen display; and

a next item heuristic for determining that the one or more finger contacts correspond to a command to transition from displaying a respective item in a set of items to displaying a next item in the set of items.

...

4. The computing device of claim 1, wherein, in one heuristic of the one or more heuristics, a contact comprising a finger swipe gesture that initially moves within a predetermined angle of being perfectly vertical with respect to the touch screen display corresponds to the one-dimensional vertical screen scrolling command.

5. The computing device of claim 1, wherein, in one heuristic of the one or more heuristics, a contact comprising a moving finger gesture that initially moves within a predefined range of angles corresponds to the two-dimensional screen translation command.

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6. The computing device of claim 1, wherein, in one heuristic of the one or more heuristics, a contact comprising a finger swipe gesture that initially moves within a predetermined angle of being perfectly horizontal with respect to the touch screen display corresponds to a one-dimensional horizontal screen scrolling command rather than the two-dimensional screen translation command.

...

10. The computing device of claim 9, wherein the first set of heuristics comprises a heuristic for determining that the one or more first finger contacts correspond to a one-dimensional horizontal screen scrolling command rather than the two-dimensional screen translation command based on the angle of initial movement of the finger contact with respect to the touch screen display.

11. A computer-implemented method, comprising: at a computing device with a touch screen display,

detecting one or more finger contacts with the touch screen display;

applying one or more heuristics to the one or more finger contacts to determine a command for the device; and

processing the command;

wherein the one or more heuristics comprise:

a vertical screen scrolling heuristic for determining that the one or more finger contacts correspond to a one-dimensional vertical screen scrolling command rather than a two-dimensional screen translation command based on an angle of initial movement of a finger contact with respect to the touch screen display;

a two-dimensional screen translation heuristic for determining that the one or more finger contacts correspond to the two-dimensional screen translation command rather than the one-dimensional vertical screen scrolling command based on the angle of initial movement of the finger contact with respect to the touch screen display; and

a next item heuristic for determining that the one or more finger contacts correspond to a command to transition from displaying a respective item in a set of items to displaying a next item in the set of items.

12. The computer-implemented method of claim 11, including:



while displaying a web browser application,

detecting one or more first finger contacts with the touch screen display;

applying a first set of heuristics for the web browser application to the one or more first finger contacts to determine a first command for the device; and

processing the first command;

wherein the first set of heuristics comprises:

the vertical screen scrolling heuristic; and

the two-dimensional screen translation heuristic;

and while displaying a photo album application,

detecting one or more second finger contacts with the touch screen display;

applying a second set of heuristics for the photo album application to the one or more second finger contacts to determine a second command for the device; and

processing the second command;

wherein the second set of heuristics comprises:

the next item heuristic, wherein the respective item in the set of items is a respective image in a set of images; and

a heuristic for determining that the one or more second finger contacts correspond to a command to transition from displaying the respective image in the set of images to displaying a previous image in the set of images.

13. The computer-implemented method of claim 12, wherein the first set of heuristics comprises a heuristic for determining that the one or more first finger contacts correspond to a one-dimensional horizontal screen scrolling command rather than the two-dimensional screen translation command based on the angle of initial movement of the finger contact with respect to the touch screen display.

14. The computer-implemented method of claim 11, wherein, in one heuristic of

the one or more heuristics, a contact comprising a finger swipe gesture that initially moves within a predetermined angle of being perfectly vertical with respect to the touch screen display corresponds to the one-dimensional vertical screen scrolling command.

15. The computer-implemented method of claim 11, wherein, in one heuristic of the one or more heuristics, a contact comprising a moving finger gesture that initially moves within a predefined range of angles corresponds to the two-dimensional screen translation command.

16. The computer-implemented method of claim 11, wherein, in one heuristic of the one or more heuristics, a contact comprising a finger swipe gesture that initially moves within a predetermined angle of being perfectly horizontal with respect to the touch screen display corresponds to a one-dimensional horizontal screen scrolling command rather than the two-dimensional screen translation command.

17. A computer readable storage medium having stored therein instructions, which when executed by a device with a touch screen display, cause the device to:

detect one or more finger contacts with the touch screen display;

apply one or more heuristics to the one or more finger contacts to determine a command for the device; and

process the command;

wherein the one or more heuristics comprise:

a vertical screen scrolling heuristic for determining that the one or more finger contacts correspond to a one-dimensional vertical screen scrolling command rather than a two-dimensional screen translation command based on an angle of initial movement of a finger contact with respect to the touch screen display;

a two-dimensional screen translation heuristic for determining that the one or more finger contacts correspond to the two-dimensional screen translation command rather than the one-dimensional vertical screen scrolling command based on the angle of initial movement of the finger contact with respect to the touch screen display; and

a next item heuristic for determining that the one or more finger contacts correspond to a command to transition from displaying a respective item in a set of items to displaying a next item in the set of items.

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18. The computer readable storage medium of claim 17, wherein the computer readable medium has stored therein instructions, which when executed by a device with a touch screen display, cause the device to:

while displaying a web browser application,

detect one or more first finger contacts with the touch screen display;

apply a first set of heuristics for the web browser application to the one or more first finger contacts to determine a first command for the device; and

process the first command;

wherein the first set of heuristics comprises:

the vertical screen scrolling heuristic; and

the two-dimensional screen translation heuristic;

and while displaying a photo album application,

detect one or more second finger contacts with the touch screen display;

apply a second set of heuristics for the photo album application to the one or more second finger contacts to determine a second command for the device; and

process the second command;

wherein the second set of heuristics comprises:

the next item heuristic, wherein the respective item in the set of items is a respective image in a set of images; and

a heuristic for determining that the one or more second finger contacts correspond to a command to transition from displaying the respective image in the set of images to displaying a previous image in the set of images.

19. The computer readable storage medium of claim 17, wherein, in one heuristic of the one or more heuristics, a contact comprising a finger swipe gesture that initially moves within a predetermined angle of being perfectly vertical with respect to the touch screen display corresponds to the one-dimensional vertical

screen scrolling command.

20. The computer readable storage medium of claim 17, wherein, in one heuristic of the one or more heuristics, a contact comprising a moving finger gesture that initially moves within a predefined range of angles corresponds to the two-dimensional screen translation command.

(JX-003 at 122:37-126:43.)

**C. Level of Ordinary Skill in the Art**

Pursuant to Order No. 16, issued on March 6, 2012, one of ordinary skill in the art relevant to the '949 patent has at least a Bachelor's degree in Computer Science or a related field, and either: (1) a Master's degree or higher in Computer Science or a related field with an emphasis on human-computer interaction; or (2) two to three years of experience in the field of user interface design for computers or mobile devices. (CX-2352C at 8.)

**D. Claim Construction**

**1. "heuristics"**

Pursuant to Order No. 16, the term "heuristic" is properly construed to mean "one or more rules to be applied to data to assist in drawing inferences from that data."

**2. "one or more heuristics"**

Pursuant to Order No. 16, the term "one or more heuristics" is properly construed in accordance with its plain and ordinary meaning to one of ordinary skill in the art at the time of the invention.

**3. other claim terms**

Pursuant to Order No. 16, the following undisputed claim constructions shall also apply: (1) "next item heuristic"/"next item command" is construed in accordance with its plain and ordinary meaning; (2) "two-dimensional screen translation" is construed to mean "movement of

screen content in two dimensions”; (3) “vertical screen scrolling” is construed to mean “movement of screen content in the vertical direction”; and (4) “based on an angle of initial movement” is construed in accordance with its plain and ordinary meaning. (*See* CX-2352C at 8-9.)

## **E. Infringement**

Apple alleges that each of the ‘949 Accused Products infringe claims 1, 4-6 and 10-20 of the ‘949 patent. (CIB at 98-99.)

### **1. Direct Infringement**

Apple’s expert, Dr. Balakrishnan, testified in detail that the ‘949 Accused Products infringe the asserted claims of the ‘949 patent. (*See* CX-2428C (Balakrishnan DWS) at Q&A 87-162.) In particular, Dr. Balakrishnan testified that it is the combination of the Browser application and Gallery application in the ‘949 Accused Products that infringes the asserted claims. (*Id.* at Q&A 82.) According to Dr. Balakrishnan, the Browser application uses a vertical screen scrolling heuristic, a two-dimensional screen translation heuristic, and a horizontal screen scrolling heuristic, and the Gallery application uses a next item heuristic and a previous item heuristic.<sup>8</sup> (*Id.*) In support of his infringement opinion, Dr. Balakrishnan relied on his inspection of Samsung’s accused products, the source code for the accused products, and the deposition testimony of Samsung’s own witnesses who testified about the operation of the accused products and the source code. (*Id.* at Q&A 83.)

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<sup>8</sup> The Browser application is used to view web pages. (CX-2428C (Balakrishnan DWS) at Q&A 82.) The Gallery application is used to view images. (*Id.*)

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Neither Dr. Balakrishnan nor Apple, however, addressed the ‘949 Design Around Products. (*See generally*, CIB; *see also id.* at Q&A 86 (“I understand that certain Samsung products have been modified. My analysis does not cover these products. For purposes of my analysis of infringement of the ‘949 patent, my analysis applies to the products shown in CDX0793C.”).) Based upon this lack of evidence, I find Apple has failed to prove by a preponderance of the evidence that the ‘949 Design Around Products infringe the asserted claims of the ‘949 patent.

Regardless, Samsung’s expert, Dr. van Dam, and Samsung employee Kiwon Lee, convincingly testified that these products do not satisfy all the elements of claim 1. (*See* RX-3632C (Lee RWS) at Q&A 24-25, 37-39; RX-3636C (van Dam RWS) at Q&A 504-509, 511-520.) Specifically, the evidence shows that the Design Around Products characterized as “Category B” devices by Samsung in its initial post-hearing brief do not meet the “vertical screen scrolling heuristic” or “one-dimensional vertical screen scrolling command” limitations of the asserted claims. (*See* RX-3632C (Lee RWS) at Q&A 24-25; RX-3636C (van Dam RWS) at Q&A 504-509.) Likewise, the evidence shows that the Design Around Products characterized as “Category C” devices by Samsung in its initial post-hearing brief do not determine whether to perform a vertical screen scrolling command, two-dimensional screen scrolling command or next item command “based on the angle of initial movement.” (*See* RX-3632C (Lee RWS) at Q&A 37-39; RX-3636C (van Dam RWS) at Q&A 511-520.)

**a. Claim 1**

Dr. Balakrishnan testified in detail that the ‘949 Accused Products meet each of the limitations of independent claim 1 and thus infringe claim 1 of the ‘949 patent. (*See* CX-2428C (Balakrishnan DWS) at Q&A 39-43, 87-122.)

Samsung argues that the ‘949 Accused Products do not infringe claim 1, because: (1) the accused products do not determine a vertical screen scrolling command based on “an angle” of initial movement; (2) the accused products do not determine a vertical screen scrolling command based on “initial movement”; and (3) the accused products do not employ heuristics for scrolling or a next item command. (*See* RIB at 112-122.)

As discussed in more detail below, I am not persuaded by any of Samsung’s arguments. Thus, in light of the evidence presented by Apple, I find that Apple has proven by a preponderance of the evidence that the ‘949 Accused Products infringe claim 1 of the ‘949 patent.

**(1) Do the accused products determine a vertical screen scrolling command “based on an angle of initial movement”?**

**The Parties’ Positions**

Apple argues that the accused products determine a vertical screen scrolling command “based on an angle of initial movement.” With regard to the ‘949 Accused Products running version 2.2, 2.3, or 3.x of the Android operating system, Apple argues that these products determine which type of screen movement to perform based on the angle of initial movement by

(*Id.*) Apple argues that nothing in the ‘949 patent claims require that an angle actually be calculated. (*Id.* at 106.) Apple argues the fact that these products perform vertical screen scrolling or a two-dimensional translation based on meets the “based on” claim language. (*Id.*) Apple argues that contrary to Samsung’s contention there is nothing in the prosecution history that disclaims the scope of the limitation “based on an angle of initial movement” and that the allegedly disavowing statements are neither clear nor unmistakable. (*Id.* at 107-109.)

With regard to the ‘949 Accused Products running version 4.0 of the Android operating system, Apple argues that these products actually calculate the angle of initial movement and use it to determine whether to perform a vertical screen scroll command or a two-dimensional screen translation command. (*Id.* at 109.) Apple argues that these products calculate the angle between P1 and P2, and the angle between P3 and P4 and then compute a weighted average of the two angles to determine whether to execute a vertical screen scroll or two-dimensional screen translation. (*Id.* at 110.) Apple argues that this meets the “based on” language in the claim. (*Id.*)

Samsung argues that the accused products do not satisfy the “based on an angle of initial movement” limitation in the claims. With regard to the ‘949 Accused Products running version 2.2, 2.3, or 3.x of the Android operating system, Samsung argues that these products

(RIB at 115.) Samsung argues



that

cannot satisfy the limitation “based on an angle of initial movement” because Apple surrendered that subject matter during prosecution to overcome prior art. (*Id.* at 110-111.)

Samsung also argues that and as such cannot be “an angle of initial movement.” (*Id.* at 111.)

With regard to the ‘949 Accused Products running Android version 4.0, Samsung argues that these products do not vertically scroll based on an angle of initial movement. (*Id.* at 118.) Samsung argues that in these products the determination of scrolling mode, either vertical, two-dimensional, or horizontal is not based on an angle of initial movement of the finger, but rather on a number of ACTION.MOVE events. (*Id.* at 119.) Samsung argues that any scrolling commands actually determined and performed in Android 4.0 devices are based on a value that does not represent the angle of initial movement and thus cannot infringe the asserted claims. (*Id.*)

The Staff argues that in the ‘949 Accused Products that run Android 2.2, 2.3, or 3.x, the effectively determines scrolling based on an angle. (SIB at 49.) The Staff argues that the claims of the ‘949 patent require scrolling based on an angle and do not require any type of calculation of an angle. (*Id.*) Staff argues that although the comparison method used by the accused products may not calculate an angle, the accused products still perform the determination based on angle of movement. (*Id.* at 49-50.) With regard to Samsung’s argument that Apple disclaimed the comparison method used in the accused products, the Staff argues that the comments in the prosecution history are not clear and unmistakable and thus no there is no disclaimer. (*Id.* at 51.) As for those accused products

running Android 4.0, the Staff argues that in those products scrolling is determined based on an angle of initial movement as to the first two motion events. (*Id.* at 54-55.) The Staff argues that the limitation “based on an angle of initial movement” merely specifies how scrolling is determined. (*Id.* at 55.) The Staff argues that contrary to Samsung’s assertion, scrolling in the accused products is based on an angle of initial movement regardless of when the movement occurs. (*Id.*)

### **Analysis**

Claim 1 of the ‘949 patent requires that the heuristics determine whether to perform one-dimensional vertical screen scrolling or two-dimensional screen translation “based on an angle of initial movement.” The parties all seem to agree that the ‘949 Accused Products implement this limitation differently depending on whether the accused products are running versions 2.2, 2.3 or 3.x of the Android operating system or version 4.0 of the Android operating system. Thus, I will address Samsung’s non-infringement argument based on the version of the Android operating system running on the ‘949 Accused Products.

#### **‘949 Accused Products Running Android Operating System Versions 2.2, 2.3, or 3.x**

With regard to those ‘949 Accused Products running Android operating system versions 2.2, 2.3, or 3.x, the evidence shows that the Browser application in the accused products determines which type of screen movement to perform

(*Id.*)

Samsung argues that because the accused products the decision to perform a vertical screen scroll or two-dimensional screen translation is not based on an angle of initial movement. I disagree. Nothing in the plain and ordinary meaning of the claim limitation requires the calculation of an angle, only that the decision to perform a vertical screen scroll or two-dimensional screen translation be “based on” an angle of initial movement.

As Dr. Balakrishnan convincingly testified

Dr. Balakrishnan convincingly shows that although the Browser application does not calculate an angle, the decision of which type of screen movement to perform based on a comparison of deltaX and deltaY values is still a decision “based” on an angle of initial movement. According, for the reasons discussed above, I have no difficulty finding that the decision to perform a vertical screen scroll or two-dimensional screen translation in the ‘949 Accused Products running versions 2.2, 2.3, or 3.x of the Android operating system is “based on an angle of initial movement.”

Samsung argues that Apple cannot now claim that the comparison of deltaX and deltaY values in the Browser application meets the “based on the angle of initial movement” limitation

in claim 1 because the patent applicant disclaimed that method during prosecution to distinguish the invention over prior art. (RIB at 110-112.) In particular, Samsung argues that “[b]ecause Apple distinguished the claimed invention over Chiu by adding a new claim limitation - ‘based on an angle of initial movement’ – this claim term cannot capture the rules disclosed in Chiu that compare horizontal and vertical movement of the finger to distinguish between different scrolling modes.” (*Id.* at 111.) I find this argument not persuasive.

To find prosecution history disclaimer the alleged disavowing action or statement must be clear and unmistakable. *See Omega Eng’g. Inc. v. Raytek Corp.*, 334 F.3d 1314, 1325-26 (Fed. Cir. 2003) (“Consequently, for prosecution disclaimer to attach, our precedent requires that the alleged disavowing actions or statements made during prosecution be both clear and unmistakable.”) Here, the evidence is not even close.

During prosecution of the ‘949 patent, the applicant had an in-person interview with the examiner where they discussed, *inter alia*, newly found references, Chiu et al. (“Chiu”) and Cheston et al. (“Cheston”). (RX-1131 at 10.)<sup>9</sup> In response to that interview and a subsequent phone call with the patent examiner, the applicant filed an amendment with accompanying remarks on June 12, 2008. (*Id.* at 10-12.) In the amendment the applicant amended the language of claim 1 to add the limitation “based on an angle of initial movement of a finger contact with respect to the touch screen display.” (*Id.* at 25; *see also id.* at 27-28 (claim 11), 30 (claim 17).) In his remarks, the applicant stated, in relevant part, that:

All of claims 1-20 include the “vertical screen scrolling heuristic” element:

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<sup>9</sup> So that there is no confusion, the page numbers to which I refer in RX-1131 are the page numbers listed after the exhibit number in the upper left hand corner of each page of the exhibit.

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“a vertical screen scrolling heuristic for determining that the one or more finger contacts correspond to a one-dimensional vertical screen scrolling command rather than a two-dimensional screen translation command based on an angle of initial movement of a finger contact with respect to the touch screen display” (Independent claims 1, 11, and 17).

As shown in the three charts in the preceding section, the references deemed most closely related to the subject matter of the claims do not teach or suggest this claim element, either expressly or inherently.

Similarly, all of claims 1-20 include the “two-dimensional screen translation heuristic” element:

“a two-dimensional screen translation heuristic for determining that the one or more finger contacts correspond to the two-dimensional screen translation command rather than the one-dimensional vertical screen scrolling command based on the angle of initial movement of the finger contact with respect to the touch screen display” (Independent claims 1, 11, and 17).

As shown in the three charts in the preceding section, the references deemed most closely related to the subject matter of the claims do not teach or suggest this claim element, either expressly or inherently.

(*Id.* at 107.)

In the chart referred to in the above remarks, the applicant distinguished the Chiu and Cheston references on a claim-by-claim, element-by-element basis. (*Id.* at 88-106.) With regard to Chiu, the applicant stated:

Chiu discloses a heuristic for determining that a multifinger finger contact corresponds to a one-dimensional vertical screen scrolling command at paragraphs 0022 and 0023.

But Chiu does not disclose a heuristic “for determining that the one of more finger contacts correspond to a one-dimensional vertical screen scrolling command rather than a two-dimensional screen translation command based on an angle of initial movement of a finger contact with respect to the touch screen display” as required by this claim.

(*Id.* at 89-90 (underlining in original).) With regard to Cheston, the applicant stated:

Cheston discloses performing “diagonal” scrolling if two or more fingers are detected on a touch pad and performing “conventional” scrolling if a single finger is detected on the touch pad at paragraph 0013 and Figure 3.

But Cheston does not disclose a heuristic “for determining that the one or more finger contacts correspond to a one-dimensional vertical screen scrolling command rather than a two-dimensional screen translation command based on an angle of initial movement of a finger contact with respect to the touch screen display” as required by this claim.

(*Id.* (underlining in original).)

Contrary to Samsung’s argument, it is not clear whether the applicant was distinguishing the claimed invention over Chiu based on the “based on an angle of initial movement” language added to the claim or on other claim language such as “determining that the one or more finger contacts correspond to a one-dimensional vertical screen scrolling command rather than a two-dimensional screen translation command.” Moreover when I considered the applicant’s comments regarding Cheston, the matter becomes more muddled. Thus, it cannot be said that the applicant’s comments are clear and unmistakable.

In fact, to the extent the evidence suggests one interpretation of the applicant’s comments regarding Chiu over another, I find the evidence supports the notion that the applicant was distinguishing the claimed invention over Chiu based on the “determining that the one or more finger contacts correspond to a one-dimensional vertical screen scrolling command rather than a two-dimensional screen translation command” claim language rather than the addition of the “based on an angle of initial movement” claim language as Samsung argues. After all, the evidence shows that Chiu “does not distinguish between one-dimensional screen scrolling and two-dimensional screen translation, which is what the ‘949 patent discloses.” (*See* Tr. at 1244:3-

22; CX-2428C (Balakrishnan DWS) at Q&A 110.) Further, the evidence shows that the claim language “based on an angle of initial movement of a finger contact with respect to the touch screen” more closely comports with the applicant’s remarks distinguishing the claimed invention over the Cheston reference, which determines the type of screen movement to perform based on the number of fingers detected on the touch pad. (See Tr. at 2082:18-2083:9; CX-2428C (Balakrishnan DWS) at Q&A 110; *see also* Tr. at 2083:22-2086:8.)

Accordingly, for the reasons discussed above, I find that the applicant’s purported disclaimer is not an unambiguous disavowal of claim scope. Thus, I find no disclaimer.

**‘949 Accused Products Running Android Operating System Version 4.0**

With regard to those ‘949 Accused Products running Android operating system version 4.0, the evidence shows that the Browser application in the accused products actually calculates an angle of initial movement and then uses that angle to determine whether to perform a vertical screen scroll command or a two-dimensional screen translation command. (Tr. at 1225:21-1226:20; CDX-1243.) In particular, the evidence shows that the Browser application calculates the angle between P1 (the point where the finger touches the screen) and P2 (the first point outside the slop zone), and the angle between P2 and P3 (the next point outside the slop zone), and then computes a weighted average of the two angles with the angle between P1 and P2 weighted at 80% and the angle between P2 and P3 weighted at 20%. (Tr. at 1225:21-1226:13; CDX-1243.) The Browser application then uses \_\_\_\_\_ to decide whether to perform a vertical screen scroll command or a two-dimensional screen translation command. (Tr. at 1226:13-15; CDX-1243.)

Contrary to Samsung's argument, the fact that the \_\_\_\_\_ is not the angle of initial movement does not negate infringement. The evidence clearly shows that \_\_\_\_\_ is based on the angle of initial movement \_\_\_\_\_ and thus the decision to perform either a vertical screen scroll command or two-dimensional screen translation command must also be based on the angle of initial movement. (Tr. at 1226:2-20; CDX-1243.) Nothing in the language of claim 1 requires that the angle of initial movement be actually calculated, but by the same token, nothing in the claim prohibits the computation of the angle of initial movement or any additional mathematical manipulation of the angle; claim 1 only requires that the determination of whether to perform a vertical screen scroll command or two-dimensional screen translation command be based on the angle of initial movement.

Accordingly, for the reasons discussed above, I find that the decision to perform a vertical screen scroll command or two-dimensional screen translation command in the '949 Accused Products running version 4.0 of the Android operating system is "based on an angle of initial movement."

**(2) Do the accused products determine a vertical screen scrolling command based on "initial movement"?**

**The Parties' Positions**

Apple argues that the accused products determine a vertical screen scrolling command based on an angle of "initial movement." Apple argues that any touch screen device must account for noise by filtering out signals that do not constitute genuine finger movement. (CIB at 101.) According to Apple, the '949 Accused Products accomplish this by using a slop threshold, and filtering out finger movements that do not exceed this threshold. (*Id.* at 101, 103-104.) Apple argues that one of ordinary skill in the art would expect a touch screen to perform a



preliminary check to account for this input slop and would not consider this to be true finger “movement.” (*Id.* at 101-102.) Apple argues that if a touch screen device did not discard input slop, the device would misinterpret a user’s intent and be unable to distinguish between a tap and a swipe. (*Id.* at 102; CRB at 52.)

Samsung argues that none of the accused devices infringe because each is designed to discard initial input data that includes initial movement data. (RIB at 120.) Thus, Samsung argues the accused products do not meet the limitation “based on initial movement.” (*Id.*) Samsung argues that although Apple asserts that movement detect as input slop is not “true finger movement” the claims of the ‘949 patent do not impose a “true finger movement” requirement. (*Id.*) Samsung argues that nowhere in the patent is initial movement described as excluding any initial input data. (*Id.*) Samsung argues that Apple’s assertion that without discarding input slop it would be impossible for the devices to record a tap gesture is incorrect. (*Id.*) Samsung argues that the ‘949 patent discusses both tap and swipe gestures that never mentions the need to discard initial movement in order to distinguish between the two. (*Id.*) Samsung argues that there are other factors that can be considered instead and that choosing to discard movement as slop is an implementation choice not a requirement that impacts the ordinary meaning of the term “initial movement.” (*Id.* at 120-121.) Samsung further argues that even if some initial input may be discarded is input slop Apple still fail to establish at the amount of initial input that is discarded in the accused products is not “initial movement.” (*Id.* at 121.)

The Staff argues the one of ordinary skill in the art would have recognized that initial movement occurs after input slop, as it is necessary to account for input slop for the system to

function accurately. (SIB at 52.) The Staff argues that if a device did not discard input slop it would be impossible to determine between a tap and a swipe. (*Id.* at 52-53.)

### **Analysis**

Claim 1 requires that the vertical screen scrolling heuristic and the two-dimensional screen translation heuristic determine whether to perform a vertical screen scrolling command or two-dimensional screen translation command “based on the angle of initial movement of the finger contact with respect to the touch screen.” Per Order No. 16, the term “based on an angle of initial movement” is properly construed in accordance with its plain and ordinary meaning.

The evidence shows because “It is impossible for a user to be perfectly precise when using a touch screen,” imprecise finger movements will be registered on the touch sensor when a user’s finger contacts the touch screen on a touch screen device. (CX-2428C (Balakrishnan DWS) at Q&A 67.) Thus, the touch sensor will invariably detect slight movements (a.k.a., input slop). (*Id.*) To account for this phenomenon, the evidence shows that touch screen devices filter out signals that do not constitute genuine finger movement.<sup>10</sup> For example, when a user “taps” the touch screen on a touch screen device, the touch sensor will detect slight movements during the time the finger is touching the touch screen due to the imprecise stability of a user’s finger. (*Id.*) If the device did not account for, and disregard, these undesired movements, the device would act in a manner that is contrary to the user’s intent by immediately scrolling even though the user intended only to perform a “tap.” (*Id.*) In fact, if a device does not take into account

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<sup>10</sup> The evidence shows the ‘949 Accused Products account for certain “input slop” movements that the system determines do not reflect real finger movement by employing a slop threshold and filtering out finger movements and other noise that do not exceed the threshold. (CX-2428C (Balakrishnan DWS) at Q&A 104, 112.)

input slop, the evidence shows that the device would not be able to distinguish between a “tap” and a “swipe.” (*Id.*) As the ‘949 patent itself includes embodiments that involve detecting a “tap” gesture as well as embodiments that involve detecting “swipe” gestures, by the same logic the invention of the ‘949 patent must account for input slop or the claimed invention would not be completely operational. (*See, e.g.*, JX-003 at 8:11-13, 19:36-41; CX-2428C (Balakrishnan DWS) at Q&A 67.)

The very purpose of discarding input slop is to ensure that the movement the system responds to is the actual initial movement of the user’s finger, rather than electrical noise or unintended movement due to the imprecision in how the user’s finger contacts the touch screen. (Tr. 1223:7-8, 1266:16-22.) As Dr. Balakrishnan convincingly testified, one of ordinary skill in the art would expect a touch screen to perform a preliminary check to account for this input slop and would not consider this to be true finger “movement.” (*See* Tr. at 1219:3-1230:15; *see also* CX-2428C (Balakrishnan DWS) at Q&A 67, 71, 112.) Thus, I find for the reasons discussed above that in the context of the ‘949 patent, one of ordinary skill in the art at the time of the invention would not have considered input slop in determining the “initial movement of the finger contact.” Accordingly, I find Samsung’s argument not persuasive.

**(3) Do the accused products employ heuristics for scrolling and a next item command?**

**The Parties’ Positions**

Apple argues that Samsung ignores my construction of the term “heuristic” and makes arguments based on a different meaning of “heuristic.” (CIB at 110.) Apple argues that this is merely a disguised attempt to reargue claim construction. (*Id.*) Apple argues that Samsung’s assertion that the accused products use algorithms and not heuristics cannot be squared with the

claims or the specification of the '949 patent. (*Id.*) Apple also argues (in Order No. 16), that I specifically concluded that “a person of ordinary skill in the art at the time of the invention was made would know an algorithm or rule to use to accomplish the claimed subject matter.” (*Id.* at 111.) Apple argues that all source code is inevitably comprised at some level of rigid rules. (*Id.*) Apple argues that the '949 patent consistently and clearly states that the claimed heuristics are embodied in code on a computing device and thus Samsung cannot avoid infringement by arguing that its source code lacks heuristics. (*Id.*)

Samsung argues that the '949 Accused Products do not infringe because they lack “heuristics” because they apply a simple mechanical rule to determine whether to perform vertical screen scrolling or two-dimensional screen translation. (RIB at 122.) Samsung argues that a rule that cannot be a heuristic because it does not assist in drawing inferences as required by the adopted claim construction. (*Id.*) Samsung also argues that a rule that displays the next photo in the Gallery application cannot be a heuristic because it too employs

(*Id.*) Samsung argues that these mechanical rules merely check if the measured value is (*Id.*) Thus, Samsung argues no inferences are made as the rules simply tell what should be done. (*Id.*)

The Staff argues that contrary to Samsung’s assertion, in light of the claim construction of the term “heuristics,” the '949 Accused Products running Android versions 2.2, 2.3, or 3.x employ rules regardless of how flexible or inflexible those rules may be. (SIB at 54.) The Staff also argues that the rules employed by the accused products make an inference about what command the user intended to trigger.” (*Id.*) The Staff argues that the '949 Accused Products

running Android 4.0 also satisfy the next item heuristics limitation for the same reasons. (*Id.* at 55.)

### Analysis

Although Samsung couches its argument in terms of a non-infringement position, I find Samsung is really attempting to re-argue claim construction. In Order No. 16, I construed the term “heuristic” to mean “one or more rules to be applied to data to assist in drawing inferences from that data.” I believe that claim construction to be proper for the reasons discussed in Order No. 16 and thus, I am not going to revisit that claim construction. (*See* Order No. 16 (“Hereafter, discovery and briefing in this Investigation shall be governed by the construction of the claim terms in this Order.”).) Contrary to Samsung’s argument, nothing in my claim construction requires that the “one or more rules” be flexible and nothing in my claim construction prevents the “one or more rules” from being implemented by an algorithm. In fact, in my order construing claim terms I specifically concluded that “one of ordinary skill in the art at the time of the invention was made would know an *algorithm or rule* to use to accomplish the claimed subject matter.” (Order No. 16 at 12 (emphasis added).)

As construed, a “heuristic” is “one or more rules to be applied to data ...” Based on the evidence of record I have no difficulty finding that the algorithms used in the ‘949 Accused Products consist of “one or more rules to be

applied to data to assist in drawing inferences from that data.” CX-2428C (Balakrishnan DWS) at Q&A 81.) For example, the evidence shows that if the user’s finger

, the Gallery application display the next photo, thereby effectively inferring from the finger movement that the user desired to view the next photo.

Accordingly, for the reasons discussed above, I find Samsung’s argument not persuasive.

**b. Claims 4, 5, 6, and 10**

Claims 4, 5, 6, and 10 depend from independent claim 1 of the ‘949 patent. Dr. Balakrishnan testified in detail that the ‘949 Accused Products satisfy the additional limitations added by these dependent claims and thus, infringe claims 4, 5, 6, and 10 of the ‘949 patent. (CX-2428C (Balakrishnan DWS) at Q&A 123-135.) Samsung does not set forth any specific non-infringement arguments regarding these claims. Accordingly, based on Dr. Balakrishnan’s undisputed testimony, I find that the ‘949 Accused Products infringe claims 4, 5, 6, and 10 of the ‘949 patent.

**c. Claims 11-16**

Claim 11 is an independent claim and asserted claims 12-16 depend from claim 11. Claim 11 is directed to a computer-implemented method that includes steps that are substantially the same as found in independent claim 1. Likewise, dependent claims 12-16 are analogous to claims 4-6 and 9-10. Dr. Balakrishnan testified in detail that the ‘949 Accused Products meet the limitations found in these claims and thus, infringe claims 11-16 of the ‘949 patent. (CX-2428C (Balakrishnan DWS) at Q&A 136-147.) Samsung does not set forth any additional non-infringement arguments regarding these claims beyond that which it asserted with regard to claim 1. Accordingly, based on Dr. Balakrishnan’s testimony, and for the same reasons I

espoused with regard to claim 1, I find that the '949 Accused Products satisfy all of the elements of claims 11-16 of the '949 patent.

Because claims 11-16 are method claims, Apple must show not only that the '949 Accused Products meet all the limitations of the claims, but also that Samsung practices the method claims. Apple argues that Samsung directly infringes each of the asserted method claims by using or testing the '949 Accused Products in the United States. (CIB at 112.) Apple argues that by operating the accused products, Samsung employees practice the claimed methods and that because these employees are acting within the scope of their employment when they test the products the Samsung entities directly infringe. (*Id.* at 112-113.) Samsung does not dispute Apple's argument and thus I find based on the arguments presented by Apple that Samsung practices method claims 11-16 of the '949 patent. Accordingly, I find that Samsung directly infringes method claims 11-16 of the '949 patent.

Although I have found hereinabove that Samsung infringes method claims 11-16, Samsung's direct infringement cannot form the basis of a violation because the infringement (*i.e.*, the practicing of the method claims) did not occur at the time of importation. *See Certain Electronic Devices with Image Processing Systems, Component Thereof, and Associated Software*, 337-TA-724, Comm'n Op. at 13-14 ("We also interpret the phrase 'articles that – infringe' to reference the status of the articles at the time of importation. Thus, infringement, direct or indirect, must be based on the articles as imported to satisfy the requirements of section 337.") Apple's arguments to the contrary are disingenuous in light of the arguments it made to the Commission in Inv. 337-TA-724. (*Id.* at 11 (noting that Apple argued that practicing the patented method steps in the United States using the imported devices could not be a violation of

Section 337 absent a showing of indirect infringement).) Moreover, contrary to Apple's argument in this investigation, the Commission explicitly found in Inv. 337-TA-724 that "with respect to method claim 16 of the '146 patent, we find that Apple does not directly infringe the patented method when it imports the accused computers because the act of importation is not an act that practices the steps of the asserted method claim." Accordingly, I find Apple's argument that there can be a violation of Section 337 based on Samsung's direct infringement of method claims 11-16 of the '949 patent in the United States after importation not persuasive.

**d. Claims 17-20**

Claim 17 is an independent claim and asserted claims 17-20 depend from claim 17. Claims 17-20 are directed to a computer readable storage medium, but are otherwise analogous to claim 1, 4, 5, and 9 of the '949 patent. Dr. Balakrishnan testified in detail that the '949 Accused Products meet the limitations found in these claims and thus, infringe claims 17-20 of the '949 patent. (CX-2428C (Balakrishnan DWS) at Q&A 148-156.) Samsung does not set forth any additional non-infringement arguments regarding these claims beyond that which it asserted with regard to claim 1. Accordingly, based on Dr. Balakrishnan's testimony, and for the same reasons I espoused with regard to claim 1, I find that the '949 Accused Products infringe claims 17-20 of the '949 patent.

**2. Indirect Infringement**

Apple argues that Samsung indirectly infringes method claims 11-16 of the '949 patent by inducing others to infringe and by contributing to the infringement. (CIB at 112-116.)



a. **Direct Infringement**

**Parties' Positions**

Apple argues that the end users of Samsung's '949 Accused Products directly infringe claims 11-16 when they use the Browser and Gallery applications on the '949 Accused Products. (CIB at 114-115.) Apple argues that prove direct infringement, a complainant must prove that during the relevant period it is more likely than not that a person in the United States performed the claimed method. (*Id.* at 114.) Apple argues that there is sufficient circumstantial evidence that at least once an end user used the Gallery or Browser applications in an infringing manner. (*Id.* at 115.) Apple argues that the likelihood that at least one end user has performed the infringing functions at least once is overwhelming particularly in light of the explicit instructions provided explaining how to use the features and the large number of accused products sold. (*Id.* at 114-115.)

Samsung argues that Apple failed to prove direct infringement by a third party. (RIB at 122.) Samsung argues that Apple has only provided evidence that Samsung employees use the accused products in the allegedly infringing manner. (*Id.* at 123.) Samsung also argues that Dr. Balakrishnan admitted that he cites to no evidence of direct infringement by anyone other than Samsung employees. (*Id.*)

The Staff argues that end users of the '949 Accused Products practice the method claims of the '949 patent. (SIB at 56-57.)

**Analysis**

To prove indirect infringement of the method claims, either by inducement or contributory infringement, Apple must show that the method claims have been directly infringed.

*Linear Tech. Corp. v. Impala Linear Corp.*, 379 F.3d 1311, 1326 (Fed. Cir. 2004) (citation omitted) (“There can be no inducement or contributory infringement without an underlying act of direct infringement.”); *Dynacore Holdings Corp. v. U.S. Philips Corp.*, 363 F.3d 1263, 1272 (Fed. Cir. 2004) (“Indirect infringement, whether inducement to infringe or contributory infringement, can only arise in the presence of direct infringement....”). Direct infringement may be proven by either direct or circumstantial evidence. *Moleculon Research Corp. v. CBS, Inc.*, 793 F.2d 1261, 1272 (Fed. Cir. 1986) (“It is hornbook law that direct evidence of a fact is not necessary. ‘Circumstantial evidence is not only sufficient, but may also be more certain, satisfying and persuasive than direct evidence.’”) (quoting *Michalic v. Cleveland Tankers, Inc.*, 364 U.S. 325, 330 (1960)); see also *Alco Standard Corp v. Tenn. Valley Auth.*, 808 F.2d 1490, 1503 (Fed. Cir. 1986) (“Although the evidence of infringement is circumstantial, that does not make it any less credible or persuasive.”).

Here, the evidence shows that Samsung provides user manuals that instruct the end users of its ‘949 Accused Products how to use the Gallery and Browser applications that are included in the ‘949 Accused Products. (See CX-2428C (Balakrishnan DWS) at Q&A 160.) The evidence shows that these manuals teach the end users, *inter alia*, the gestures that are recognized and used by the Gallery and Browser applications. (*Id.*) For example, the user manual for the Sidekick 4G SGH-T839 instructs users on navigating with the Browser application, stating, “To scroll through a website, sweep the screen with your finger in an up or down motion.” (See CX-341 at 167.) Similarly, the user manual for the Sidekick 4G SGH-T839 instructs users on viewing pictures using the Gallery application, stating: “Touch and drag a picture to the left to see the next picture or to the right to see the previous picture.” (*Id.* at 126.)

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The evidence shows that all of the ‘949 Accused Products’ user manuals contain similar instructions. (*See, e.g.*, CX-336-53, CX-356-62, CX-375-400, CX-416-31.)

In addition, the evidence shows that Samsung publicly demonstrates use of the ‘949 Accused Products in an infringing manner, including in videos posted to its Mobile’s YouTube channel (*See* CX-281 at 6:57–7:06; *see also* CX-277 at 0:33–38.) Finally, the evidence shows that SEA directly instructs end users on how to use these products, including the use of the infringing Gallery and Browser applications, through its customer support staff. (CX-2557C (Merrill Dep.) at 71:15-75:9; CX-280 at 2:10, 4:00, and 5:00.)

To prove direct infringement, Apple must have proven that during the relevant period “more likely than not one person somewhere in the United States had performed the claimed method.” *Lucent Techs., Inc. v. Gateway, Inc.*, 580 F.3d 1301, 1318 (Fed. Cir. 2009). In light of the large numbers of the ‘949 Accused Products sold by Samsung (*see* CDX-183C and CDX-184C (

) and the user manuals and demonstrations that teach end users the gestures that necessarily invoke the claimed heuristics, I find that the likelihood that at least one end user has performed the claimed method at least once is overwhelming. *See Toshiba Corp. v. Imation Corp.*, No. 2011-1204, slip op. at 11 (Fed. Cir. June 11, 2012) (“[W]here an alleged infringer designs a product for use in an infringing way and instructs users to use the product in an infringing way, there is sufficient evidence for a jury to find direct infringement.”); *see also Certain Semiconductor Chips*, Inv. No. 337-TA-661, ID at 43 (“[E]vidence of extensive sales in the United States has been found sufficient to show direct infringement by end users that perform a claimed method when operating an accused product as the manufacturer intended.”)

Accordingly, I find that Apple has proven direct infringement of the claimed methods by the end users of the '949 Accused Products.

**b. Inducement**

**The Parties' Positions**

Apple argues as Samsung has provided manuals instructing end users of the '949 Accused Products how to use functions that employ the claimed heuristics, by, for example, navigating with a browser in the Browser application or scrolling through pictures in the Gallery application. (CIB at 113-114.) Apple also argues that Samsung publicly demonstrates use of the '949 Accused Products in a manner that infringes claims 11-20 of the '949 patent. (*Id.*) Additionally, Apple argues that SEA directly instructs its customers through its customer support staff on how to use the accused products including use of the infringing Browser and Gallery applications. (*Id.* at 114.) Apple further argues that Samsung had actual knowledge of the 949 patent and of Apple's contentions that its products infringe the '949 patent. (*Id.*) Thus, Apple argues the evidence shows that Samsung induces its customers to infringe the '949 patent. (*Id.* at 114-115.)

Samsung argues that Apple has failed to prove the requisite elements of indirect infringement. (RIB at 122.) Samsung argues that Apple failed to prove direct infringement by any third party. (*Id.* at 122-123.) Samsung also argues that Apple failed to prove that it possessed the requisite knowledge and intent required to establish liability for inducement. (*Id.*) Samsung argues there is no evidence of specific intent to infringe and in fact to the contrary, the evidence shows that Samsung had a good faith belief that its products do not infringe the '949 patent and that the '949 patent is invalid. (*Id.* at 124.) Samsung also argues that Apple failed to

establish that the accused features are especially adapted for use in an infringement of the '949 patent and lack substantial non-infringing uses. (*Id.* at 122, 125.)

Staff argues that Samsung induces infringement of the claims by providing user manuals instructing its end users of its products to use the browser and gallery applications in a manner that infringes the method claims of the '949 patent. (SIB at 57.) The Staff argues that Samsung knew or should have known of the existence of the '949 patent as of \_\_\_\_\_ and that its actions regarding instructing its end users would induce infringement of the asserted method claims. (*Id.*)

### **Analysis**

I have already found, *supra*, that Apple has shown by a preponderance of the evidence that claims 11-16 of the '949 patent are directly infringed by the end users of the '949 Accused Products. Thus, the only questions that remain are whether Samsung's actions induced the infringing acts and whether Samsung knew or should have known its actions would induce actual infringement.

As discussed in detail, *supra*, Samsung provides manuals that instruct end users of the '949 Accused Products to use, *inter alia*, the Browser and Gallery applications in a manner that infringes claims 11-16 of the '949 patent. Additionally, as previously discussed, Samsung publically demonstrates in an infringing manner the use of the '949 Accused Products and provides direct instruction through its support staff to the end users on how to use the infringing Browser and Gallery applications. Thus, I find Samsung's actions induced the infringing acts of the end users of the '949 Accused Products.

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Samsung admits that it had actual knowledge of the ‘949 patent and of Apple’s contention that Samsung’s products were infringing the ‘949 patent as early as (JX-218C at 384 (

); CX-406C at 15.)<sup>11</sup> Thus, I find that the evidence shows Samsung had knowledge of the ‘949 patent and Apple’s general allegation of infringement regarding same at least as early as

Despite of having been on notice of the ‘949 patent and having been provided claim charts showing alleged infringement (at least as of the time of the Complaint), the evidence shows that Samsung continues to manufacture, import, and sell the ‘949 Accused Products. The evidence also shows that the Browser and Gallery applications in the ‘949 Accused Products are designed in such a manner that they cannot be fully used for their intended purposes without infringing claims 11-16 of the ‘949 patent. *See Water Technologies*, 850 F.2d at 668-69 (Inferring specific intent to cause infringement from a defendant’s knowledge of the patent and control over the design or manufacturing of the product used for direct infringement.). The evidence further shows, as previously discussed, that Samsung instructs end users to use the Gallery and Browser applications in such a manner that necessarily requires invoking the claimed heuristics. *See Grokster*, 545 U.S. at 936 (Recognizing that providing instruction on

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<sup>11</sup> In any event, Samsung was certainly aware of the ‘949 patent and Apple’s specific infringement contentions as of the date they were served a copy of the Complaint in this investigation, which was August 2, 2011. *See Certain Inkjet Ink Cartridges With Printheads and Components Thereof*, Inv. No. 337-TA-723, Initial Determination, 2011 ITC LEXIS 1503 at \*145 (June 10, 2011) (finding the knowledge requirement for contributory infringement satisfied based on service of the complaint).

how to engage in an infringing use “show[s] an affirmative intent that the product be used to infringe.”). Accordingly, I find that Apple knew or should have known that its actions instructing and demonstrating to end users how to use the Browser and Gallery applications actively encouraged them to use the ‘949 Accused Products in a manner that infringes claims 11-16 of the ‘949 patent. Thus, for the reasons espoused above, I find that Samsung designs, manufactures, imports and sells the accused products with the specific intent to induce infringement of claims 11-16 of the ‘949 patent.

Accordingly, I find that Samsung actively induces infringement of claims 11-16 of the ‘949 patent in violation of 35 U.S.C. § 271(b).

**c. Contributory Infringement**

**The Parties’ Positions**

Apple argues that Samsung contributes to the infringement of the accused products by its customers. (CIB at 115.)

(*Id.*) Apple argues that the relevant source code used by the ‘949 Accused Products has no purpose other than to practice the claimed heuristics and therefore has no substantial non-infringing use. (*Id.*) Apple argues that it is irrelevant that Samsung’s accused devices as a whole can perform other non-infringing functions. (*Id.*) Apple argues that the relevant question is whether the source code has any substantial non-infringing use. (*Id.*) Apple argues that the accused features in the ‘949 Accused Products have no non-infringing use as it is not possible to perform a vertical screen scroll or two-dimensional screen translation in the browser application in the accused products or to move between pictures in the gallery

application in the accused products without infringing the '949 patent. Thus, Apple argues Samsung is liable for contributory infringement. (*Id.* at 116.)

Samsung argues that Apple did not prove contributory infringement because it failed to show that the accused components do not have substantial non-infringing uses and are especially adapted for use in an infringement of the patent. (RIB at 125.) Samsung argues that Apple does not even identify what the component is that is allegedly especially adapted for use in an infringement of the patent. (*Id.*) Samsung argues that all Apple identifies is the “source code discussed above,” which is insufficient to meet its burden. (*Id.*)

The Staff argues that the evidence does not show that Samsung contributes to infringement of the asserted method claims. (SIB at 57.) In particular the Staff argues that Apple has failed to show that the accused products are especially adapted for use in an infringement of the '949 patent. (*Id.*) The Staff argues that although Apple asserts that the source code in the '949 Accused Products has no purpose other than to practice the claimed methods, the evidence shows the source code in the accused products exist in various forms and that neither type of source code is especially adapted for use in infringement of the '949 patent. (*Id.*)

### **Analysis**

Under 35 U.S.C. § 271(c), a party is liable for contributory infringement if he “offers to sell or sells within the United States or imports into the United States ... a material or apparatus for use in practicing a patented process, constituting a material part of the invention, knowing the same to be especially made or especially adapted for use in an infringement of such patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use.” Apple



argues that the “material or apparatus” is “the portions of source code [in the Browser and Gallery applications] that control the scrolling and translation operations.”<sup>12</sup> (CIB at 115-116; CRB at 56.) In support Apple relies on the testimony of its expert, Dr. Balakrishnan, who stated only that “[t]he source code discussed above, which Samsung has represented is used in its accused products, has no purpose other than to practice this method, and therefore has no substantial non-infringing use.” (CX-2428C (Balakrishnan DWS) at Q&A 160.)

Dr. Balakrishnan’s testimony is entirely conclusory and fails to explain in any detail how in fact the source code relied upon is adapted for use in an infringement of the ‘949 patent or why such source code does not have any substantial non-infringing use. Thus, I find Apple has failed to meet its burden of showing that “the portions of source code” are especially made for use in infringement of the patent, and have no substantial non-infringing uses.

Moreover, I disagree with Apple that the relevant “material or apparatus” is “the portions of source code” in the Browser and Gallery applications that control the scrolling and translation operations. Claim 11 requires functionality that is not present in the “the portions of source code” that control the scrolling and translation operations. For example, claim 11 requires “detecting one or more finger contacts with the touch screen display,” however, the “portions of source code” relied on by Apple are not responsible for detecting one or more finger contacts with a touch screen display. Because the claims require more than just control of scrolling and translation operations, the relevant “material or apparatus” cannot be limited to the “portions of

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<sup>12</sup> Apple asserts for the first time in its reply brief that the “portions of source code” it is referring to is the source code responsible for the “zoom, crop, and text selection features.” Apple did not clarify this in its initial post-hearing brief and it is too late for Apple to do so on reply as it unfairly prejudices Samsung and the Staff.

source code.” Rather, I find the “material or apparatus” is more properly characterized as the Browser and Gallery applications. With regard to the Browser and Gallery applications, the evidence shows that those applications have non-infringing uses that are substantial. (*See* RX-3636C (van Dam RWS) at Q&A 579; *see also* CX-0341 at 140, 162.) Accordingly, for this reason also, I find Apple has failed to prove that Samsung contributory infringes claims 11-16 of the ‘949 patent.

**F. Technical Prong of the Domestic Industry Requirement**

**Parties’ Positions**

Apples alleges that each of its domestic industry products practices claim 1 of the ‘949 patent. (CIB at 116.) Apple argues that the Weather, Photos, and Safari applications in the Domestic Industry Products practice each and every limitation of claim 1. (*Id.* at 116-117.) In particular, Apple argues that in response to a user’s swipe, the Mobile Safari application in the Domestic Industry Products will either execute a vertical screen scroll or two-dimensional screen translation based on the angle of initial movement. (*Id.* at 116.) Likewise, Apple argues that in response to a user’s swipe, the Photos application in the Domestic Industry Products will implement a next item heuristic. (*Id.*) The Staff agrees. (SIB at 58-59.)

Samsung argues that the Domestic Industry Products do not practice claim 1 of the ‘949, because: (1) the Domestic Industry Products do not have a scrolling heuristic that is based on “initial movement”; and (2) the Domestic Industry Products do not employ heuristics for scrolling or a next item command. (*See* RIB at 125-127.)

**Analysis**

Dr. Balakrishnan testified in detail that Apple's iPad, iPad2, original iPhone, iPhone 3G, iPhone 3GS, iPhone 4, iPhone 4S, iPod Touch 3G, and iPod Touch 4G (collectively "Domestic Industry Products") running both Apple iOS 3 and iOS 5 practice claim 1 of the '949 patent. (See CX-2428C (Balakrishnan DWS) at Q&A 34-38, 44-45, 47-79; CDX-961C.) Specifically, Dr. Balakrishnan testified that the '949 patent is practiced by each of the Domestic Industry Products through at least the operation of the Mobile Safari, Weather, and Photo applications. (*Id.* at Q&A 44.) Dr. Balakrishnan based his opinion on his inspection and testing of the operation of those applications in the Domestic Industry Products, his analysis of the source code files used by the applications, and documents produced by Apple showing certain features of these products. (*Id.* at 45.)

As discussed in more detail below, I am not persuaded by Samsung's arguments. Thus, in light of Dr. Balakrishnan's testimony I find that Apple has proven by a preponderance of the evidence that the Domestic Industry Products practice claim 1 of the '949 patent.

- 1. Do the domestic industry products determine a vertical screen scrolling command based on "initial movement"?**

**Parties' Positions**

Apple argues that in the Mobile Safari application, a user can execute a vertical screen scroll by swiping their finger in a roughly vertical direction. (CIB at 116.) Apple argues that the fact that the Domestic Industry Products discard input slop does not change the fact that the products meet the limitation "based on the angle of initial movement" because one of ordinary skill in the art would appreciate that input slop does not count as "movement" for purposes of the patented invention. (*Id.* at 117.) The Staff agrees. (SIB at 58-59.)

Samsung contends that the Domestic Industry Products do not determine a vertical screen scrolling command based on initial movement because the products ignore initial movement within a “hysteresis” value of 10 pixels. (RIB at 125-126.)

### **Analysis**

Dr. Balakrishnan testified in detail that the Domestic Industry Products determine a vertical screen scrolling command based on initial movement. (*See* CX-2428C (Balakrishnan DWS) at Q&A 63-71.) Samsung’s argument that the Domestic Industry Products do not determine a vertical screen scrolling command based on initial movement because the products ignore initial movement within a “hysteresis” is really just a repeat of its non-infringement argument regarding input slop. Accordingly, I find for the same reasons I discussed with regard to Samsung’s non-infringement position that one of ordinary skill in the art at the time of the invention would not have considered input slop to be initial movement.

Thus, based on the testimony presented by Apple, I find that Apple has proven by a preponderance of the evidence that the Domestic Industry Products determine a vertical screen scrolling command based on “initial movement.”

## **2. Do the domestic industry products employ heuristics for scrolling and a next item command?**

### **Parties’ Positions**

Apple argues that the next item heuristic is implemented in the Photo application in the Domestic Industry Products. Apple argues that that the Domestic Industry Products employ rules that constitute heuristics despite the fact that they are embodied in algorithms with no flexibility. (*Id.* at 117.) Apple argues that Samsung’s argument that its products don’t meet this

limitation is based on an overly narrow interpretation of the term “heuristic” that is contrary to the claim construction adopted for that term. (*Id.*) The Staff agrees. (SIB at 59.)

Samsung argues that Apple’s products do not practice the ‘949 patent because they do not employ heuristics, but rather mechanical rules that use predetermined constants to determine whether to scroll vertically or in two dimensions. (RIB at 126-127.)

### **Analysis**

Dr. Balakrishnan testified, in great detail, how the Domestic Industry Products employ heuristics for vertical screen scrolling and next item command. (*See* CX-2428C (Balakrishnan DWS) at Q&As 44-46 and 62-66.) Samsung’s argument that the Domestic Industry Products do not employ heuristics is a mirror of its non-infringement argument. Accordingly, for the same reasons I discussed with regard to Samsung’s non-infringement position, I find that the algorithms used by the Domestic Industry Products to interpret the user’s finger movement as either invoking a vertical screen scrolling command or next item command are heuristics.

Thus, based on the testimony of Dr. Balakrishnan, I find that Apple has proven by a preponderance of the evidence that the Domestic Industry Products use heuristics to determine whether to perform a vertical screen scrolling command or next item command.

## **G. Validity**

### **1. Anticipation**

#### **a. Wakai Patent and Wakai Application**

### **The Parties’ Positions**

Apple argues that Wakai does not anticipate because Wakai does not disclose a two-dimensional screen translation command or determining that finger contacts correspond to this

command. (CIB at 122.) Apple argues that Wakai does not disclose a two-dimensional translation, but instead discloses what its expert calls a screen rotation command. (*Id.* at 123.) Apple argues that given its ordinary meaning, “rotation” would not be considered a type of two-dimensional translation by one of ordinary skill in the art. (*Id.*) Moreover, Apple argues that the ‘949 patent itself uses rotation to mean something different than two-dimensional screen translation. (*Id.* at 124.) Apple argues that nothing in the specification’s description of rotation indicates that the applicants thought it was a kind of two-dimensional translation. (*Id.*) Further, Apple argues that during one of the two reexamination proceedings for the ‘949 patent the patent examiner explicitly stated that a rotational transformation is not a two-dimensional screen translation. (*Id.*) The Staff agrees. (SIB at 63.)

Samsung argues that claims 1, 4-6, 11, 14-17, and 20 are anticipated by the Wakai patent and the Wakai application.

### **Analysis**

Samsung argues that claims 1, 4-6, 11, 14-17, and 20 of the ‘949 patent are anticipated by U.S. Patent No. 7,138,983 (“the Wakai patent”) and U.S. Patent Publication No. 2002/0036618 (“the Wakai application”). In support, Samsung relies primarily on the testimony of its expert, Dr. van Dam, who testified in detail that the Wakai patent and Wakai application anticipate many of the asserted claims of the ‘949 patent. (*See* RX-3448C (van Dam DWS) at Q&A 229-297, 326-329.)

The Wakai patent was filed on January 26, 2001, which is before the September 6, 2006, effective filing date of the ‘949 patent. (*See* RX-606.) Thus, the Wakai patent is prior art under 35 U.S.C. § 102(e). The Wakai application was published on March 28, 2002, which is more

than one year prior to the September 6, 2006, effective filing date of the '949 patent. (*See* RX-355.) Thus, the Wakai application is prior art under 35 U.S.C. § 102(b). The Wakai patent and Wakai application share an identical disclosure and thus Samsung's anticipation arguments apply equally to both references. Accordingly, I will discuss the Wakai patent and Wakai application together and refer to them collectively as "Wakai."

Every asserted claim of the '949 patent requires heuristics that determine whether to perform a vertical screen scroll command or two-dimensional screen translation command based on one or more finger contacts. (*See e.g.*, JX-003 at 122:37-123:2; 123:12-17, *etc.*) Samsung contends that Wakai discloses a screen content rotation operation that causes screen content to move in two dimensions about a fixed center of rotation and that this meets the construction of the phrase "two-dimensional screen translation." (RIB at 128.) I disagree.

In Order No. 16 I construed the phrase "two-dimensional screen translation" to mean "movement of screen content in two dimensions." In the context of the '949 patent, however, the evidence shows that one of ordinary skill in the art at the time of the invention would not have understood "movement of screen content in two dimensions" to include rotation. (CX-2591C (Balakrishnan RWS) at Q&A 82.) Instead, the evidence shows that one of ordinary skill in the art would have understood that in a "two-dimensional screen translation" the pixels being translated will appear to move in the same direction and at the same time along two dimensions. (*Id.*) Even Samsung's expert, Dr. van Dam, testified that given its ordinary meaning, "rotation" would not be considered a type of two-dimensional translation by one of ordinary skill in the art. (Tr. at 1595:10-1596:16.) The prosecution history also confirms that rotation is not an example of translation as during one of the reexaminations of the '949 patent,

the examiner stated that “a rotational transformation is not a ‘two-dimensional screen translation.’” (CX-284 at APL-ITC796-X0000003740.) Furthermore, claim 7 of the ‘949 patent, which depends from claim 1, adds a limitation that requires a heuristic where a contact comprising a simultaneous two-thumb twisting gesture corresponds to a 90° screen rotation command. (JX-003 at 123:30-33.) Thus, the ‘949 patent itself distinguishes between rotation and two-dimensional screen translation.

Accordingly, for the reasons discussed above, I find that Wakai fails to disclose a “two-dimensional screen translation” as required by claims 1, 4-6, 11, 14-17, and 20. Because Wakai does not disclose every limitation of the claims, I find that Wakai does not anticipate claims 1, 4-6, 11, 14-17, and 20 of the ‘949 patent.

**b. Westerman Reference**

**The Parties’ Positions**

To understand Westerman, Apple explains its background as follows:

The Westerman thesis discusses a touch pad that Wayne Westerman developed while a graduate student at the University of Delaware. (RX-2591C (Balakrishnan) at 15-17, Q31-33.) As Dr. Van Dam acknowledged, the Westerman thesis spans 333 pages, and describes research with the goal of “build[ing] a touch pad that could replace both the keyboard and the mouse on a computer.” (Tr. at 1550:8-12.) Much of the thesis describes “how the system can sense what’s happening when the user puts multiple fingers and, perhaps, even the palms of both hands on the touch pad at the same time.” (*Id.* at 1552:2-8.) Tracking the movement of multiple fingers at the same time was complex in 1999, and remains complex to this day. (*Id.* at 1552:15-1553:5.) Sophisticated tracking of the location and movement of multiple fingers was the primary focus of the Westerman thesis. (*Id.* at 1554:1-12.)

(CIB at 119.)



Apple notes Westerman was disclosed to the PTO during two different requests for reexamination of the '949 patent and both times the examiner found the Westerman reference did not disclose elements of the '949 patent's claims. (*Id.*)

Apple argues that the Westerman thesis does not anticipate the claims of the 949 patent, because the thesis fails to disclose the claimed heuristics required by the claim language. (CIB at 119-122.) Specifically Apple argues that the Westerman thesis does not disclose a heuristic for distinguishing between a two-dimensional screen translation command and a vertical screen scrolling command. (*Id.* at 119-120.) Apple argues that at most Westerman discloses a four finger gesture and that even if this gesture was interpreted to be a two-dimensional screen translation command Westerman still fails to disclose a vertical screen scrolling command, let alone a rule to distinguish between them. (*Id.* at 120.)

Apple asserts that: Dr. Van Dam focuses on a single paragraph from Chapter 5 of Westerman. (*Id.*) This paragraph states, in its entirety:

Like the recent dual-pointing-stick bulldozer-interface of Zhai *et al.*, the hand motion extractor presented in this chapter will try to strike a compromise between integrity and separability. The motion filters will pass simultaneous motions in multiple components or degrees of freedom which are truly in diagonal directions, thus allowing fast manipulation across shortest path diagonals. But when one of the rotation, scaling, or translation degrees of freedom dominates, indicating the direction of motion is nearly along an axis, the non-dominant components will be suppressed so that control occurs exactly along the axis.

(*Id.*, citing RX-1266C at 264-265.) Apple then argues:

As Dr. Balakrishnan has explained, this paragraph describes the ways Westerman's system analyzed movements of the hands and fingers on the touch pad, not what commands are executed or what transpires on the screen as a result of the finger movement. The passage states that "[t]he motion filters will pass simultaneous motions in multiple components or degrees of freedom." (CX-2591C (Balakrishnan) at 19-23, Q40-45.) Dr. Van Dam confirmed on cross-

examination that these motion filters analyze hand motion, as opposed to screen motion. (Tr. 1558:8-1562:18.)

(CIB at 120.)

Apple argues that the passage in the Westerman thesis that Samsung's expert relies on is admittedly ambiguous and thus cannot support a finding of anticipation by clear and convincing evidence. (*Id.* at 120-121.) Apple argues Dr. van Dam agrees the passage it discussed from Chapter 5:

. . . simply involves the ways in which the hand motion extractor will filter out certain types of hand motions. There is nothing in this passage to suggest that certain commands should be treated as a two-dimensional screen translation command or a one-dimensional vertical screen scrolling command. Indeed, this passage does not involve any screen "commands" at all. (CX-2591C (Balakrishnan) at 18-23, Q40-45.)

(*Id.* at 121.) Hence it was wrong of Dr. van Dam to say of person of ordinary skill in the art would interpret "nearly along an axis" language from Westerman to mean motion on the screen is occurring exclusively on either a horizontal or vertical axis. (*Id.*)

Apple further argues that the Westerman thesis fails to disclose a touch screen, as required by each of the asserted claims. (*Id.* at 122.) Apple argues that Westerman only discloses using gestures on a system using a touch pad. (*Id.*)

Samsung argues that all asserted claims of the '949 patent are anticipated by the Westerman Thesis. (RIB at 129.) Further, Samsung alleges that Apple has conceded Westerman meets every limitation of the '949 patent but for two, *i.e.*, "(1) the existence of a touch screen ; (2) the existence of a vertical screen-scrolling command, and by implication, the existence of a heuristic distinguishing between such a command and a two-dimensional screen translation command. (*Id.*) Samsung also contends that even though Westerman Thesis is complex, that

does not change that it is anticipatory prior art because a hypothetical person of ordinary skill in the art “to which the claimed subject matter pertains would, of necessity have the capability of understanding the scientific and engineering principles applicable to the pertinent art”); *In re Gorman*, 933 F.2d 982, 986 (Fed. Cir. 1991). (RIB at 129.)

Samsung alleges Westerman expressly discloses a touch screen and even has a section entitled “Touch Pads and Screens.” (RIB at 129-130.) Moreover, Samsung alleges Dr. Westerman discussed efforts to extract “hand or finger motion on a proximity-sensing surface such as a touchpad or touch screen.” in his paper.<sup>13</sup> (RIB at 130.)

Samsung also alleges that Westerman discloses a “scrolling command,” and moreover, “describes the mapping of a particular gesture to that scrolling command.” (*Id.*) While conceding Apple disputes Westerman does not teach vertical scrolling, Samsung argues Westerman determines screen movement based on whether any four degrees of freedom, *i.e.*, horizontal translation, vertical translation, rotation, or scaling dominates to such a degree as to suppress the other degrees of freedom. (*Id.*) Samsung argues that if the movement of the hand

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<sup>13</sup> I note the entire context of the language from Dr. Westerman that Samsung quotes is:

Surprisingly, no one is known to have derived more than 2-DOF of control from hand or finger motion on a proximity-sensing surface such as a touchpad or touch screen. This can probably be attributed to the small form factor of touchpads and to the scarcity of multi-touch sensing technologies for independently weighting and filtering motions of multiple fingers. This chapter will present techniques for weighting and filtering motions of particular fingers to integrally extract rotation and scaling degrees of freedom from unbalanced finger motions.

(RX-1266C at 225.)