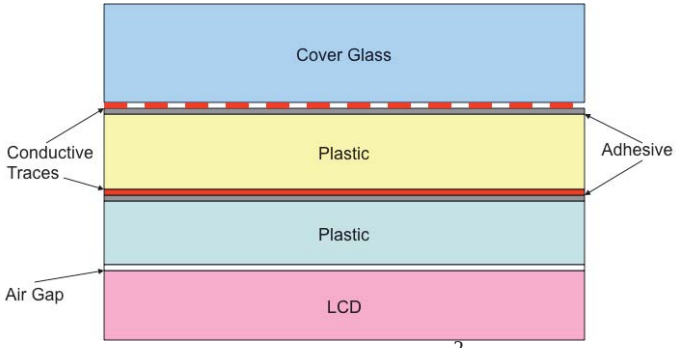
EXHIBIT 8

Infringement Claim Chart for U.S. Patent No. 7,663,607

U.S. Patent No. 7,663,607	Samsung Galaxy Tab 10.1
Claim 1	
A touch panel comprising a transparent capacitive sensing medium configured to detect multiple touches or near touches that occur at a same time and at distinct locations in a plane of the touch panel and to produce distinct signals representative of a location of the touches on the plane of the touch panel for each of the multiple touches, wherein the transparent capacitive sensing medium comprises:	The Samsung Galaxy Tab 10.1 includes a touch panel comprising a transparent capacitive sensing medium configured to detect multiple touches or near touches that occur at a same time and at distinct locations in a plane of the touch panel and to produce distinct signals representative of a location of the touches on the plane of the touch panel for each of the multiple touches. More specifically, the Galaxy Tab 10.1 contains a 10.1-inch WXGA TFT (PLS) LCD touchscreen. (*See, e.g.*, Samsung Galaxy Tab 10.1 Android Tablet User Manual ("User Manual"), at 10.)[1] The touchscreen of the Galaxy Tab 10.1 operates as a capacitive sensing medium. In particular, as illustrated in the schematic diagram below, the touchscreen includes two separate sets of conductive traces, and senses touches through capacitive coupling between the two.  (Schematic Diagram of Samsung Galaxy Tab 10.1 Teardown)[2] Moreover, the LCD touchscreen on the Galaxy Tab 10.1 is configured to detect multiple touches or near

[1] *Available at* http://downloadcenter.samsung.com/content/UM/201106/20110610070713309/GENERIC_GT-P7510_Galaxy_Tab_10-1_English_USER_MANUAL.pdf.

[2] This schematic diagram and the others in this chart are meant to be illustrative. Certain details are omitted for clarity.

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	touches that occur at a same time and distinct location. For instance, the LCD touchscreen is used to navigate and configured to detect multiple touches, such as using two fingers to "pinch" to zoom in or zoom out. (*See, e.g.*, User Manual at 15.) ***Screen Navigation*** **Touch** Touch items to select or launch them. For example: • Touch the on-screen keyboard to enter characters or text. • Touch a menu item to select it. • Touch an application's icon to launch the application. **Touch and Hold** Activate on-screen items. For example: • Touch and hold a widget on the home screen to move it. • Touch and hold on a field to display a pop-up menu of options. **Swipe, Flick, or Slide** Swipe, flick, or slide your finger vertically or horizontally across the screen. For example: • Unlocking the screen • Scrolling the Home screens or a menu **Pinch** Use two fingers, such as your index finger and thumb, to make an inward pinch motion on the screen, as if you are picking something up, or an outward motion by sweeping your fingers out. For example: • Pinch a photo in Gallery to zoom in. • Pinch a webpage to zoom in or out.  (User Manual at 15.) Further, the Galaxy Tab's touchscreen, and its associated controller and driver software, generates distinct signals when more than one touch is detected. The existence and generation of these signals is confirmed by the Android platform software running on the Galaxy Tab. In particular, the Galaxy Tab runs version

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	3.1 ("Honeycomb") of the Android platform. ("Samsung Galaxy Tab 10.1 (Wi-Fi Only), Product Features.")[3] This version of Android includes software objects of the class MotionEvent, which are "used to report movement (mouse, pen, finger, trackball) events." (Android Developer Site, Class MotionEvent.)[4] The MotionEvent class can include data regarding multiple simultaneous pointer touches, or near touches, with the touchscreen. (*Id.*) Moreover, the source code for the MotionEvent class indicates that it includes information, such as an array holding multiple objects of type PointerCoords, each of which includes data (*e.g.*, x and y coordinates, major and minor axes, and pressure) associated with a distinct touch occurring at the same time on the touchscreen. (Android Source Code at MotionEvent.java.)[5] On information and belief, discovery will confirm that the data stored in these data structures originates from distinct signals generated by the Galaxy Tab's touchscreen, which are representative of multiple distinct touches.
a first layer having a plurality of transparent first conductive lines that are electrically isolated from one another; and	The Samsung Galaxy Tab 10.1 includes a transparent capacitive sensing medium that comprises a first layer having a plurality of transparent first conductive lines that are electrically isolated from one another. More specifically, the first layer contains lines that are made of a transparent conductive material and are electrically isolated from each other via etch gaps, as illustrated in the figures below.

[3] *Available at* http://www.samsung.com/us/mobile/galaxy-tab/GT-P7510MAYXAB.
[4] *Available at* http://developer.android.com/reference/android/view/MotionEvent.html.
[5] The source code referenced here refers to version 2.3 of the Android source code, as this is the last version that is publicly available. The developer documentation cited above indicates that the functionality in question also exists in versions 3.0, 3.1, and higher, of Android.

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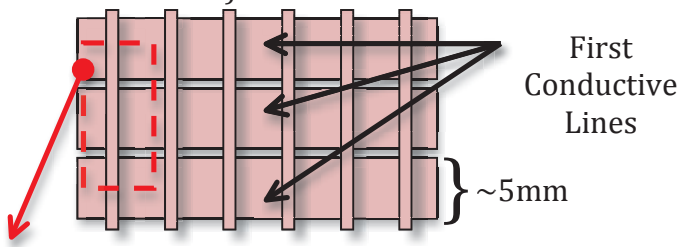
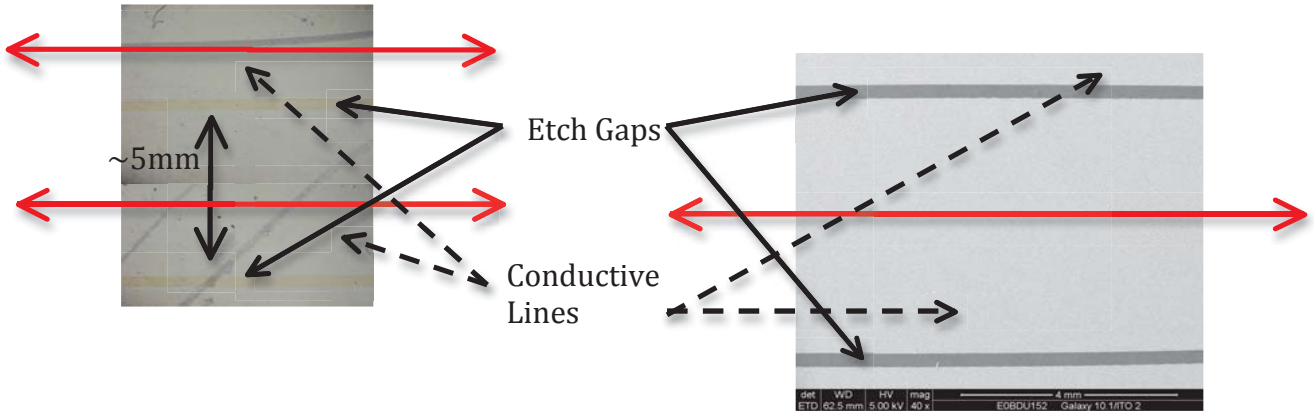
	(Schematic Diagram of First and Second Conductive Lines[7])   (Galaxy Tab 10.1, Optical Micrographs of First Conductive Lines[6]) (Galaxy Tab 10.1, Scanning Electron Micrographs of First Conductive Lines)

[6] This figure is a composite of multiple micrographs. The image was observed using an optical microscope, multiple pictures were taken, and then they were placed together to illustrate what was observed. Further, annotations to the optical and scanning electron micrographs, including labels and arrows, are not part of the micrographs and were added based on what was observed under a microscope.

[7] This schematic diagram and the others in this chart are meant to be illustrative. Certain details are omitted for clarity. Further, the dimensions in the schematics and figures were added based on measured results and scale bars on the images.

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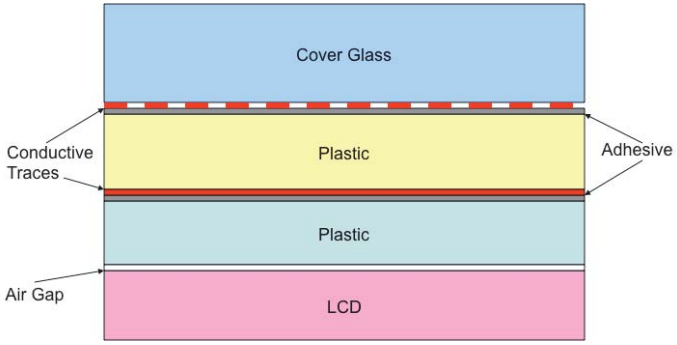
a second layer spatially separated from the first layer and having a plurality of transparent second conductive lines that are electrically isolated from one another,	The Samsung Galaxy Tab 10.1 contains a second layer spatially separated from the first layer and having a plurality of transparent second conductive lines that are electrically isolated from one another. More specifically, as illustrated in the schematic diagram below, the Galaxy tab includes first and second layers that contain transparent conductive lines and are spatially separated from each other by a plastic layer.  (Schematic Diagram of Samsung Galaxy Tab 10.1 Teardown) Further, the second layer's transparent conductive lines, illustrated in the micrographs below, are electrically isolated from one another by an etch gap and by "dummy" regions, which are not electrically connected to each other or to the first conductive lines. The presence of the etch gap and the dummy regions electrically isolates the second set of conducting lines from each other.

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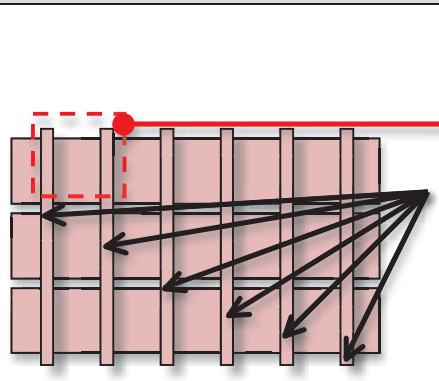
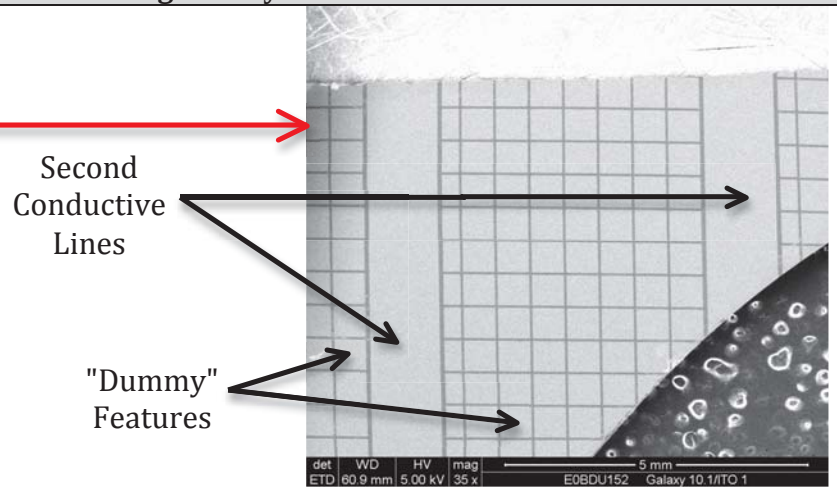
	 (Galaxy Tab 10.1 Teardown Schematic)  (Galaxy Tab 10.1, Scanning Electron Of Second Conductive Lines)
the second conductive lines being positioned transverse to the first conductive lines, the intersection of transverse lines being positioned at different locations in the plane of the touch panel,	The Samsung Galaxy Tab 10.1 contains second conductive lines that are positioned transverse to the first conductive lines, such that the intersection of transverse lines are positioned at different locations in the plane of the touch panel. More specifically, as illustrated above, the second conductive traces are transverse to the first conductive lines. When the first conductive lines are positioned in the horizontal direction, the second conductive lines are positioned in the vertical direction, as illustrated above in the micrographs and the schematic diagrams.
each of the second conductive lines being operatively coupled to capacitive monitoring circuitry;	In the Galaxy Tab 10.1, each of the second conductive lines is operatively coupled to capacitive monitoring circuitry. In particular, as the diagrams above show, the Samsung Galaxy Tab 10.1 uses a capacitive touchscreen and, accordingly, the intersections of the first and second conductive lines act as capacitive sensors. The conductive lines are necessarily connected to circuitry that monitors the capacitive coupling between these sets of conductive lines, as information relating to touches occurring

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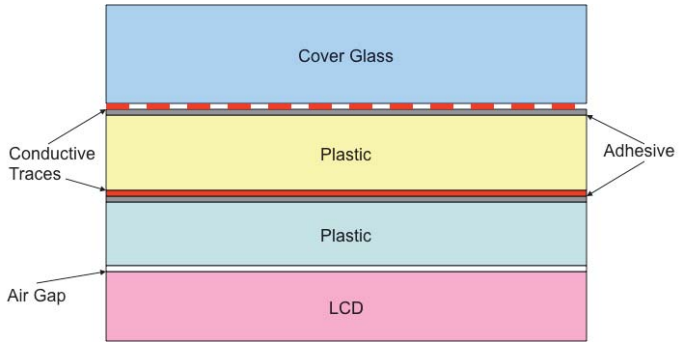
	on the touchscreen is conveyed from the touchscreen, via its controller, and/or driver software, to the overlying Android software platform. (*See* Android Source Code at MotionEvent.java.) Moreover, the touchscreen of the Galaxy Tab 10.1 is responsive to touches occurring on the touchscreen, such as gestures used to navigate the device. (User Manual at 15.) Again, the conductive lines of the Galaxy Tab's touchscreen must necessarily be connected to capacitive monitoring circuitry to enable the detection of these touches and the device's response to them. On information and belief, discovery will confirm the identity of the specific circuit elements within the Galaxy Tab 10.1 that implement this functionality.
wherein the capacitive monitoring circuitry is configured to detect changes in charge coupling between the first conductive lines and the second conductive lines.	The Samsung Galaxy Tab 10.1 includes capacitive monitoring circuitry configured to detect changes in charge coupling between the first conductive lines and the second conductive lines. As shown above, the touchscreen in the Samsung Galaxy Tab 10.1 is a mutual capacitance touchscreen, which includes two sets of spatially separated traces, oriented transverse to each other. As set forth above, one set of conductive lines are connected to the capacitive monitoring circuitry. When a current is driven through elements on the other set of lines, the capacitive monitoring circuitry can detect changes in charge coupling between the first and second set of conductive lines when an object is on or near the touchscreen.  (Schematic Diagram of Samsung Galaxy Tab 10.1 Teardown)

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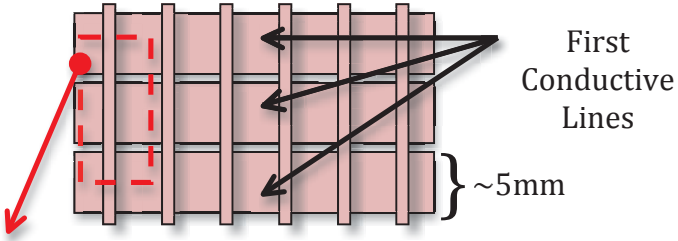
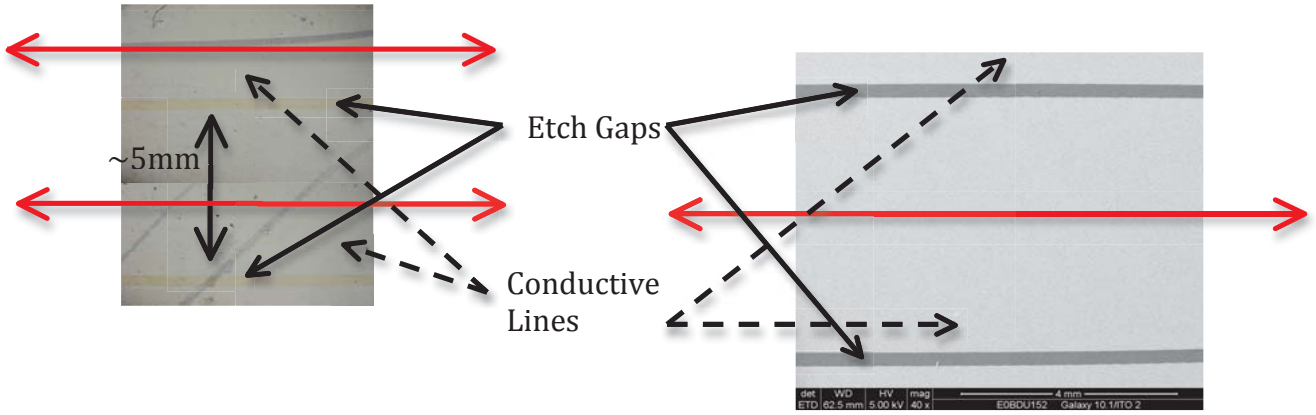
Claim 2	
The touch panel as recited in claim **1** wherein the conductive lines on each of the layers are substantially parallel to one another	The Samsung Galaxy Tab 10.1 has conductive lines on each of the layers that are substantially parallel to one another as shown by the images below. (Schematic Diagram of First and Second Conductive Lines)   (Galaxy Tab 10.1, Optical Micrographs of First Conductive Lines) (Galaxy Tab 10.1, Scanning Electron Micrographs of First Conductive Lines)

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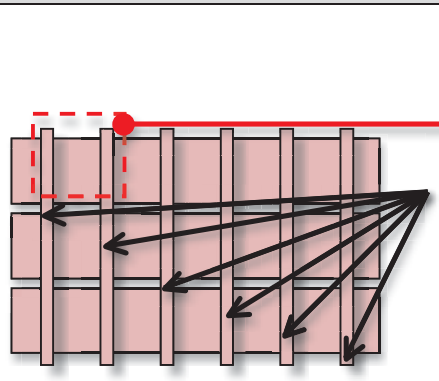
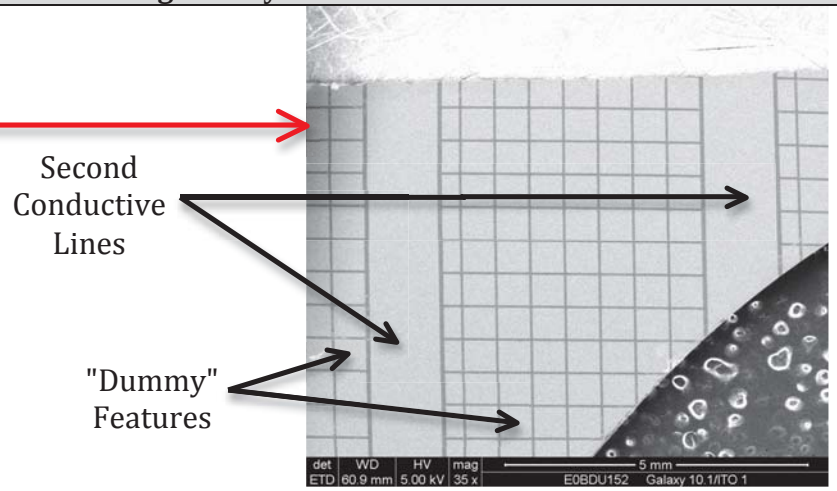
	 (Galaxy Tab 10.1 Teardown Schematic)  (Galaxy Tab 10.1, Scanning Electron Of Second Conductive Lines)
Claim 3	
The touch panel as recited in claim **2** wherein the conductive lines on different layers are substantially perpendicular to one another.	The Samsung Galaxy Tab 10.1 contains conductive lines on the first and second layers of the touch panel within the Galaxy Tab 10.1 are oriented substantially along the X and Y axes, respectively, of a Cartesian grid and are therefore substantially perpendicular to one another.
Claim 6	
The touch panel as recited in claim **1** wherein the conductive lines are formed	The Samsung Galaxy Tab 10.1 contains conductive lines formed from indium tin oxide. For instance, x-ray photoelectron spectroscopy ("XPS") indicates that the conductive lines comprise indium, tin, and oxygen.

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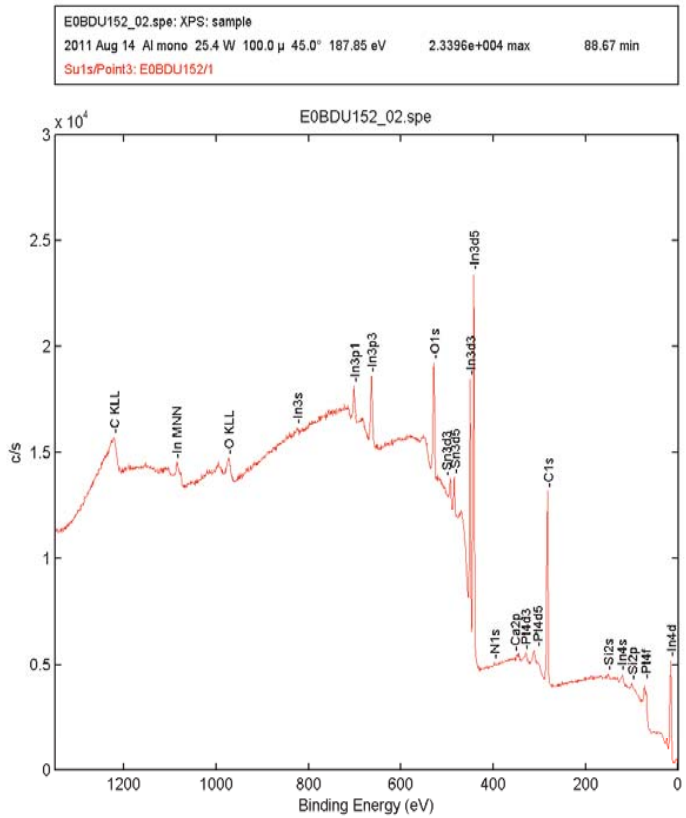
from indium tin oxide (ITO).	 (Galaxy Tab 10.1, X-Ray Photoelectron Spectroscopic Analysis of Conducting Traces)
Claim 7	
The touch panel as recited in claim **1**, wherein the capacitive sensing method is a mutual capacitance	The touch panel in the Samsung Galaxy Tab 10.1 is a mutual capacitance sensing medium. In particular, as shown above, the touch panel includes two sets of conductive lines separated by a non-conductive layer and oriented transverse to each other. As set forth above, one set of conductive lines are connected to the capacitive monitoring circuitry. When a current is driven through elements on the other set of

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sensing medium.	lines, the capacitive monitoring circuitry can detect changes in charge coupling between the first and second set of conductive lines when an object is on or near the touchscreen. The Galaxy Tab 10.1's touch panel is, therefore, a mutual capacitance sensing medium.
Claim 8	
The touch panel as recited in claim **7,** further comprising a virtual ground charge amplifier coupled to the touch panel for detecting the touches on the touch panel.	Upon information and belief, the Samsung Galaxy Tab 10.1 contains a virtual ground charge amplifier coupled to the touch panel for detecting the touches on the touch panel; the specific circuit elements performing this function will be identified in discovery.
Claim 10	
A display arrangement comprising: a display having a screen for displaying a graphical user interface; and	The Samsung Galaxy Tab 10.1 comprises a display in the form of a screen for displaying a graphical user interface.

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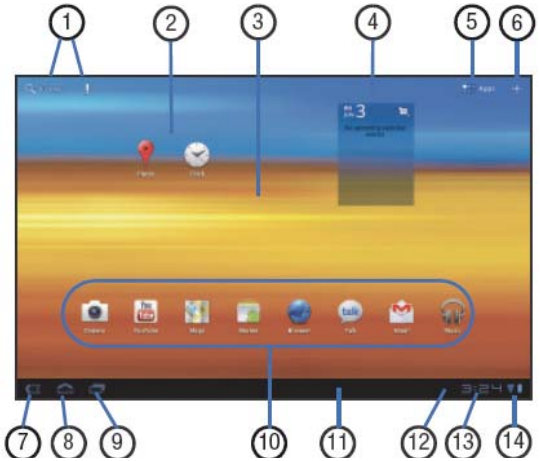
	6. **Customize** or **Menu**: Display options for the current screen. From a Home screen, you can add Widgets and App shortcuts, and change the Home screen wallpaper by touching **Customize**. From application screens, touch **Menu** to display options for the current screen. For more information, see *"Widgets"* on page 20, *"App Shortcuts"* on page 22, and *"Wallpapers"* on page 23.  **Tip:** The area across the top of the screen is called the Application Bar. 7. **Back**: Return to the previous screen or option. 8. **Home**: Display the central Home screen. 9. **Recent Apps**: Open a list of thumbnail images of apps you have worked with recently. Touch an App to open it. 10. **Primary Shortcuts**: Shortcuts to common features. For more information, refer to *"Primary Shortcuts"* on page 18. 11. **System Bar**: The area along the bottom of the Home screen where you can find navigation buttons and icons that show notifications, battery power, and connection details. 12. **Notification Icons**: Presents icons to show notifications from the system or from an application. Touch a Notification Icon to display more detail. For a list of icons, see *"Status Bar"* on page 17. 13. **Time**: The current time. For more information, refer to *"Date and Time"* on page 114. (User Manual at 12-13.)
a transparent touch panel allowing the screen to be viewed there through and capable of recognizing multiple touch events that occur at different locations on the touch panel at a	The Samsung Galaxy Tab 10.1 includes a transparent touch panel allowing the screen to be viewed there through and capable of recognizing multiple touch events that occur at different locations on the touch panel at a same time and to output this information to a host device to form a pixilated image. More specifically, the Samsung Galaxy Tab 10.1 includes a transparent touchscreen capable of accepting and detecting multiple simultaneous touches. For instance, the LCD is used to navigate and configured to detect multiple touches, such as using two fingers to "pinch" to zoom in or zoom out. (*See, e.g.*, User Manual at 15.)

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same time and to output this information to a host device to form a pixilated image;	***Screen Navigation*** **Touch** Touch items to select or launch them. For example: • Touch the on-screen keyboard to enter characters or text. • Touch a menu item to select it. • Touch an application's icon to launch the application. **Touch and Hold** Activate on-screen items. For example: • Touch and hold a widget on the home screen to move it. • Touch and hold on a field to display a pop-up menu of options. **Swipe, Flick, or Slide** Swipe, flick, or slide your finger vertically or horizontally across the screen. For example: • Unlocking the screen • Scrolling the Home screens or a menu **Pinch** Use two fingers, such as your index finger and thumb, to make an inward pinch motion on the screen, as if you are picking something up, or an outward motion by sweeping your fingers out. For example: • Pinch a photo in Gallery to zoom in. • Pinch a webpage to zoom in or out.  (User Manual at 15.) Moreover, the Galaxy Tab outputs information regarding touches on its touchscreen to a host device to form a pixilated image. In particular, as set forth below, the Galaxy Tab includes two sets of conducting traces, oriented transverse to each other and forming a capacitive sensor, or node, at each intersection. The data from these sensors is processed and used to represent the proximity of an object to the touchscreen at each sensor node, which in turn is used to form a pixilated image as claimed.
wherein the touch panel includes a multipoint sensing arrangement	The Samsung Galaxy Tab 10.1 includes a multipoint sensing arrangement configured to simultaneously detect and monitor the touch events and a change in capacitive coupling associated with those touch events at distinct points across the touch panel. The Samsung Galaxy Tab 10.1 permits multiple

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configured to simultaneously detect and monitor the touch events and a change in capacitive coupling associated with those touch events at distinct points across the touch panel; and	simultaneous touch inputs and accordingly includes a sensing arrangement to detect and monitor touch events. (*See*, *e.g.*, User Manual at 15.) ***Screen Navigation*** **Touch** Touch items to select or launch them. For example: • Touch the on-screen keyboard to enter characters or text. • Touch a menu item to select it. • Touch an application's icon to launch the application. **Touch and Hold** Activate on-screen items. For example: • Touch and hold a widget on the home screen to move it. • Touch and hold on a field to display a pop-up menu of options. **Swipe, Flick, or Slide** Swipe, flick, or slide your finger vertically or horizontally across the screen. For example: • Unlocking the screen • Scrolling the Home screens or a menu **Pinch** Use two fingers, such as your index finger and thumb, to make an inward pinch motion on the screen, as if you are picking something up, or an outward motion by sweeping your fingers out. For example: • Pinch a photo in Gallery to zoom in. • Pinch a webpage to zoom in or out.  (User Manual at 15.) Further, the touchscreen of the Galaxy Tab 10.1 operates as a capacitive sensing medium to monitor the change in capacitive coupling associated with touch events. In particular, as illustrated in the schematic diagram below, the touchscreen includes two separate sets of conductive traces, and senses touches through capacitive coupling between the two. This coupling occurs at the intersections between a first and a second conducting line at distinct points on the touch panel.

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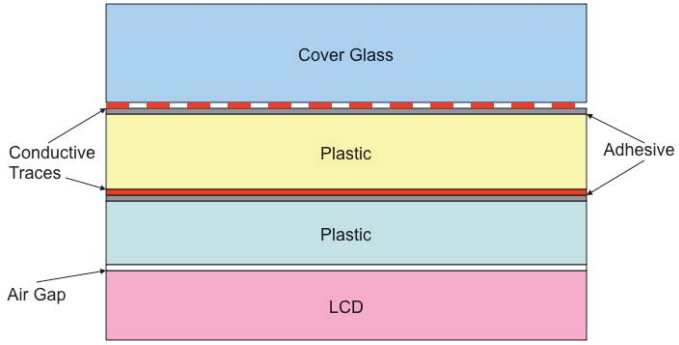
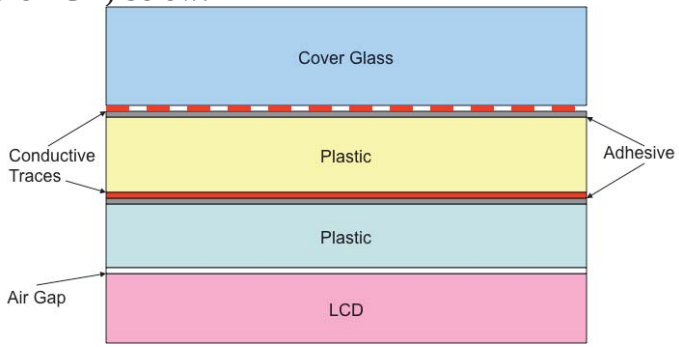
	 (Schematic Diagram of Samsung Galaxy Tab 10.1 Teardown.)
wherein the touch panel comprises: a first glass member disposed over the screen of the display;	The Samsung Galaxy Tab 10.1 includes a touch panel with a first glass member disposed over the screen of the display. For instance, the first glass member disposed over the LCD is a plastic layer illustrated in light green (plastic above the LCD) below.[8]  (Schematic Diagram of Samsung Galaxy Tab 10.1 Teardown)

[8] Apple contends that the claimed "glass members" are present both literally and under the doctrine of equivalents. To the extent that Samsung asserts, or the Court finds, that the "glass members" are not literally present, Apple contends that they are present because plastic and tempered glass are insubstantially different within the context of the '607 patent. In addition, plastic and tempered glass function in the same way to produce the same result as glass, and these two substances are substantially interchangeable for the purposes of the claims.

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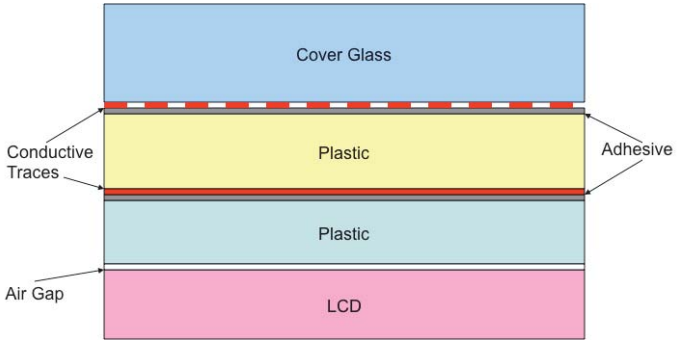
a first transparent conductive layer disposed over the first glass member, the first transparent conductive layer comprising a plurality of spaced apart parallel lines having the same pitch and linewidths;	The Samsung Galaxy Tab 10.1 includes a touch panel with a first transparent conductive layer disposed over a first glass member. More specifically, the first transparent conductive layer is the layer of conductive traces (indicated by the solid red line), which is disposed over the plastic just above the LCD.  (Schematic Diagram of Samsung Galaxy Tab 10.1 Teardown) The first transparent conductive layer comprises a plurality of spaced apart lines having the same pitch and linewidths. In particular, the first transparent conductive layer is comprised of a plurality of parallel lines have a line width of approximately 5mm and a pitch of approximately 5.0-5.3mm.

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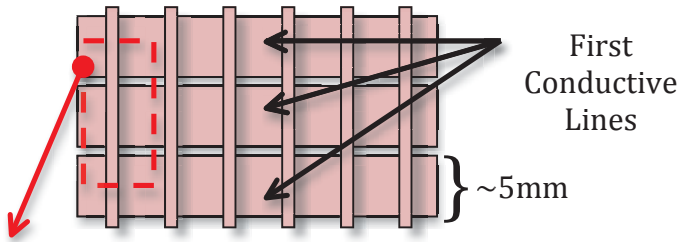
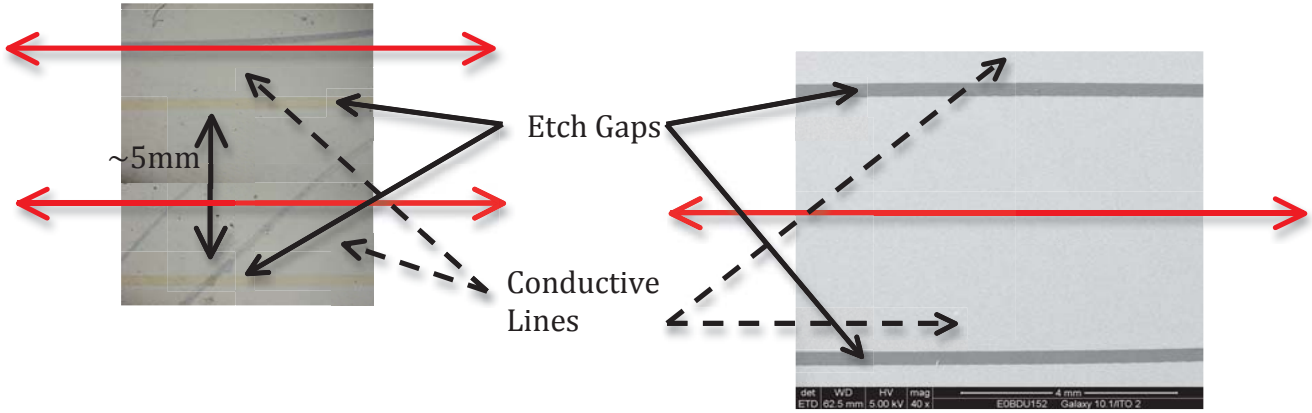
	(Schematic Diagram of First and Second Conductive Lines)   (Galaxy Tab 10.1, Optical Micrographs of First Conductive Lines) (Galaxy Tab 10.1, Scanning Electron Micrographs of First Conductive Lines)
a second glass member disposed over the first transparent conductive layer;	The Samsung Galaxy Tab 10.1 contains a second glass member disposed over the first transparent conductive layer. More specifically, a layer of plastic, illustrated in yellow (the plastic below the cover glass) in the schematic diagram below, is disposed over the first transparent conductive layer.

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	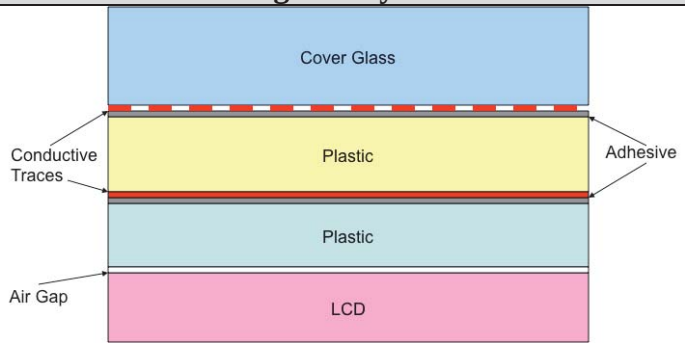 (Schematic Diagram of Samsung Galaxy Tab 10.1 Teardown)
a second transparent conductive layer disposed over the second glass member, the second transparent conductive layer comprising a plurality of spaced apart parallel lines having the same pa and linewidths, the parallel lines of the second transparent conductive layer being substantially perpendicular to the parallel lines of the first transparent conductive layer;	The Samsung Galaxy Tab 10.1 contains a second transparent conductive layer disposed over the second glass member, the second transparent conductive layer comprising a plurality of spaced apart parallel lines having the same pitch and linewidths, the parallel lines of the second transparent conductive layer being substantially perpendicular to the parallel lines of the first transparent conductive layer. More specifically, as shown below, the second transparent conductive layer comprises a plurality of parallel spaced-apart lines having the same linewidth, which is approximately 1.0-1.1mm, with a pitch of approximately 5mm. Further, the conductive lines on the first and second layers of the touch panel within the Galaxy Tab 10.1 are oriented substantially along the X and Y axes of a Cartesian grid, respectively, and are therefore substantially perpendicular to one another.

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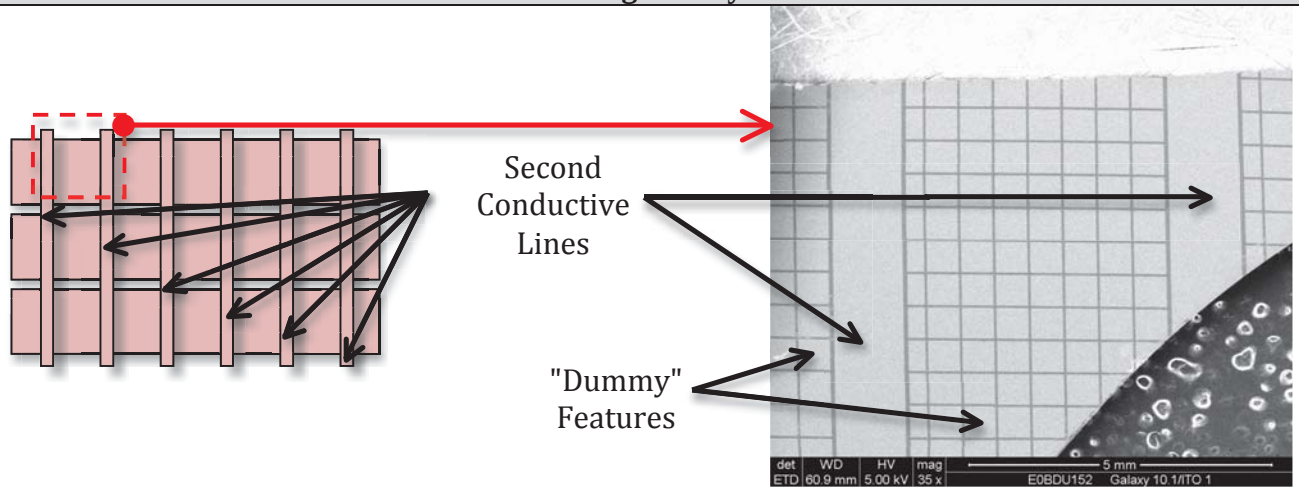
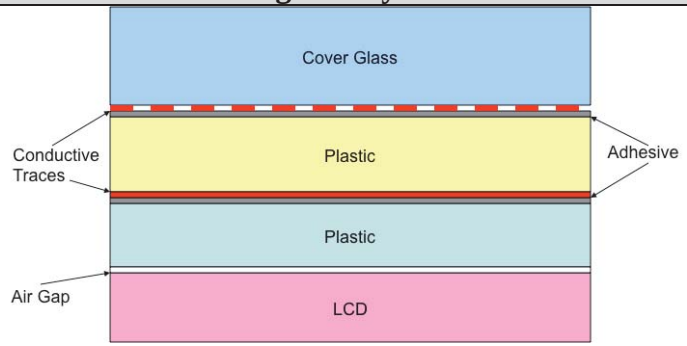
	 (Galaxy Tab 10.1 Teardown Schematic) (Galaxy Tab 10.1, Scanning Electron Of Second Conductive Lines)
a third glass member disposed over the second transparent conductive layer; and	The Samsung Galaxy Tab 10.1 contains a third glass member disposed over the second transparent conductive layer. More specifically, the Samsung Galaxy Tab 10.1 contains a glass member in the form of tempered glass. (User Manual at 125.) ("Using excessive force or a metallic object when pressing on the touch-screen may damage the tempered glass surface and void the warranty.") As shown in the schematic diagram below, the third glass member (*i.e.*, the cover glass) is disposed over the second transparent conductive traces (represented by the dashed red line below).

U.S. Patent No. 7,663,607	Samsung Galaxy Tab 10.1
	 (Schematic Diagram of Samsung Galaxy Tab 10.1 Teardown)
one or more sensor integrated circuits operatively coupled to the lines.	The Samsung Galaxy Tab 10.1 includes one or more sensor integrated circuits operatively coupled to the conductive lines. The intersections of the first and second conductive lines act as capacitive sensors. The conductive lines are necessarily connected to sensor integrated circuits, as information relating to touches occurring on the touchscreen is conveyed from the touchscreen, via its controller, and/or driver software, to the Android software platform. (*See* Android Source Code at MotionEvent.java.) Moreover, the touchscreen of the Galaxy Tab 10.1 is responsive to touches occurring on the touchscreen, such as gestures used to navigate the device. (User Manual at 15.) Again, the conductive lines of the Galaxy Tab's touchscreen must necessarily be connected to sensor circuitry to enable the detection of these touches and the device's response to them. On information and belief, discovery will confirm the identity of the specific circuit elements within the Galaxy Tab 10.1 that implements this functionality.
Claim 11	
The display arrangement as recited in claim **10** further including dummy features disposed in the space between the parallel lines,	The Samsung Galaxy Tab 10.1 includes dummy features disposed in the space between the parallel lines, the dummy features optically improving the visual appearance of the touchscreen by more closely matching the optical index of the lines. The dummy features are composed of the same, or substantially the same, material as the conductive lines, such as ITO, and therefore closely match the optical index of the lines. The cells are not electrically connected to each other, or to the conductive lines themselves.

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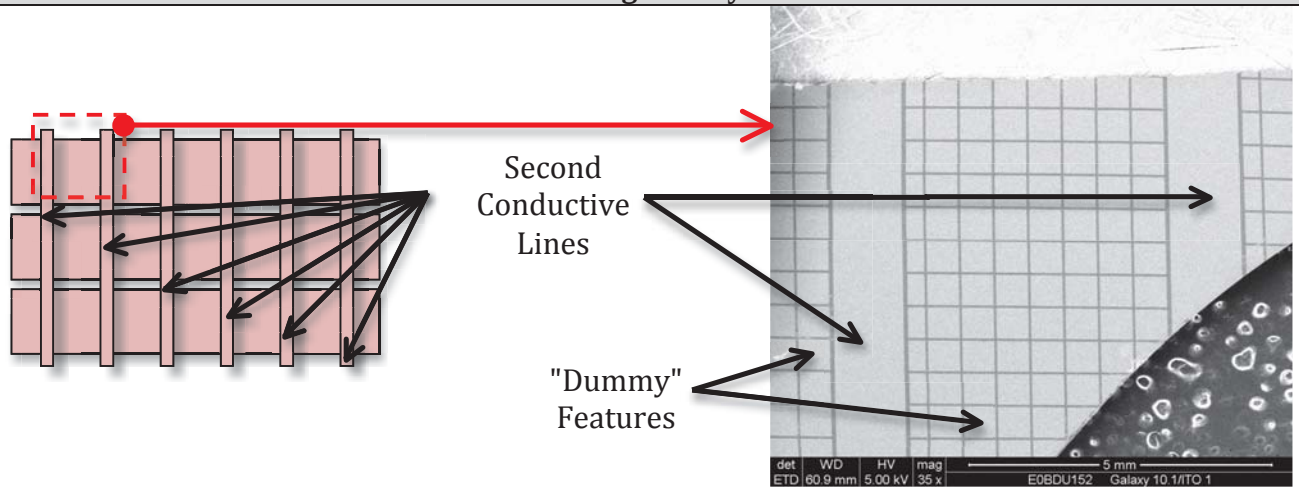
the dummy features optically improving the visual appearance of the touchscreen by more closely matching the optical index of the lines.	 (Galaxy Tab 10.1 Teardown Schematic) (Galaxy Tab 10.1, Scanning Electron Of Second Conductive Lines)