EXHIBIT M

SUMMARY OF TESTIMONY AND OPINIONS OF ROBERT DEZMELYK

I, Robert Dezmelyk, provide the following summary of the testimony I reasonably expect to provide in connection with the claims construction proceedings in Elan Microelectronics Corp. v. Apple, Inc., Case No. 09-cv-01531 RS (PVT).

1. I have been retained by plaintiff Elan Microelectronics Corp. ("Elan") to provide analysis and testimony related to the patents asserted in this case, including if necessary the meaning any terms or phrases used in those patents would have to one of ordinary skill in the art to which the patents pertain.

2. I will describe my background and qualifications to provide expert testimony on those subjects. In particular, I earned a bachelor's degree from the Massachusetts Institute of Technology where I was enrolled in a special program for the study of computer-based control systems. In 1980 I founded LCS/Telegraphics and have been its CEO since then. LCS is a leading supplier of input device software and consulting services. During the 1990s I created software code for operating system drivers for touchpads from all of the leading manufacturers, including Synaptics, Inc. and the Cirque Corp. subsidiary of Alps Electronics. I have also written software and firmware code to control the operation of a variety of other types of touch sensitive input devices such as digitizing tablets, touchscreens, etc. As such I am very familiar with the structure and operation of touch sensitive input devices as described in the asserted patents.

3. I expect that I will provide an opinion as to the level of one of ordinary skill in the art to which each of the patents is directed. In particular, I expect to testify that each of the patents in suit, other than the '929 patent, is related to various aspects of touch sensitive input devices and the level of ordinary skill in the art for all of those patents would be an individual with at least a bachelors' degree in electrical engineering, or computer science with course work in electronic circuits, with three years of experience in the design and operation of touch-sensitive input devices. One with a more advanced degree may have less practical experience. As basis I rely on my experience with others in the field and the background of witnesses deposed in the *Elantech v. Synaptics* litigation. For the '929 patent the level of ordinary skill in the art would be an individual with a mechanical engineering, industrial engineering or design degree and familiarity with the mechanical systems used in computers and personal electronic devices.

SUMMARY OF TASK AND MATERIALS CONSULTED

4. I have been asked to review the disputed terms from the asserted claims of the patents in suit as disclosed in the parties' Joint Claim Construction Statement and I understand that I may be asked to provide my opinion as to the way one of ordinary skill in the art would understand certain of those claim terms. I have also

been asked to provide an overview of the technology relevant to these patents, and provide my opinion regarding the background and experience that would typify a person having ordinary skill in the art to which the patents pertain. In addition to the Joint Claim Construction Statement and materials cited in that document, I have reviewed the parties' Disclosures of Claim Construction and Extrinsic evidence and the cited material, the patents in suit and their file histories, and certain of the prior art cited in the patents or by the parties in their disclosure of invalidity contentions. I also base my opinions on my experience in the field and knowledge of relevant technologies.

TECHNICAL OVERVIEW

5. I expect to provide an overview of the various technologies relevant to the asserted patents. In particular, I will describe the various known applications for touch-sensitive input devices, such as digitizing tablets, touchscreens and touchpads.

6. I also expect to describe the various methods of determining the location of a user contact with an input surface, including resistive touch surfaces, capacitive touch surfaces and other options including optical and surface acoustic wave devices.

Resistive Touch Sensors

7. For resistive sensing technologies, I expect that I will describe the physical components of an exemplary device and explain the theory of operation in which such a device senses a user contact, determines the location of that contact and tracks movement of the contact until it is terminated. That description will include a description of the analog signals developed by a resistive touch panel, the conversion of those analog signals into digital form, and the processing of those digital values to arrive at location coordinates, including known methods for filtering out unintended or "noise" values.

8. Resistive touch sensors, in the most common case, have two sheets of slightly flexible plastic that is either partially conductive itself, or has a partially conductive coating. The sheets are kept a very small distance apart, often by an array of tiny spacers on the surface of the lower sheet so that no contact occurs between them until the user either presses his finger or a stylus on the surface of the upper plastic sheet. At least one of the sheets is designed to have sufficient resistance so that a voltage can be placed across the sheet with a minimal current flow through the sheet. Along the axis which has a voltage placed across it, the voltage will vary from the full value of the voltage on one side, near the voltage source, to about zero on the other side. The voltage will vary proportionally according to the distance from the voltage source, so that midway between the sides of the sheet the voltage is exactly one half of the input voltage. As shown in the diagram below, when the user's finger touches the upper sheet it deforms downward and contacts the lower sheet, making an electrical connection with the

lower sheet. At that point in time, the voltage present on the lower sheet can be measured. Because the measured voltage will be proportional to the position of the touch point in one of the x or y directions, the ratio of the measured voltage to the total voltage is the same as the ratio of the touch position to the total width of the resistive sheet. In order to measure both the X and Y coordinates, it is necessary to repeat the measurement process on the other axis. In that case the voltage may be impressed on the bottom sheet, and the voltage is measured on the top sheet.

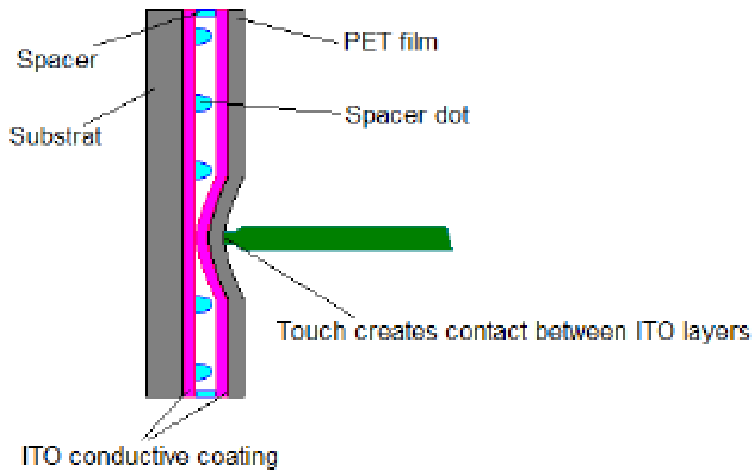

Figure 1 - Cross section view of a resistive touch sensor.

9. The simplest design, named after the number of connecting wires required, is a 4-wire sensor where the upper sheet has the voltage for one axis impressed upon it, and the lower sheet is used for the opposite axis.

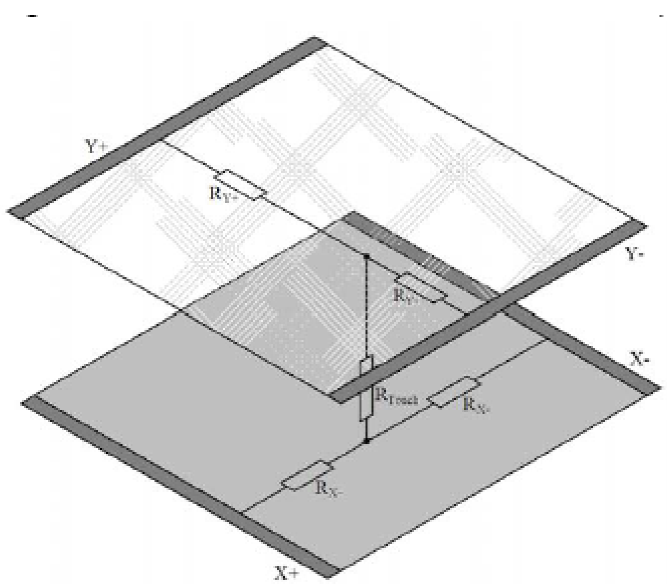

Figure 2 - The effective circuit formed when a touch occurs showing the two conductive sheets for X and Y and their electrodes.

10. Actual touch screen designs typically include more complex techniques for impressing voltage on the sheets and sensing the voltage that results from the voltage divider in an effort to remove errors that result from unwanted resistance in parts of the signal path, and susceptibility to electrical noise. In particular, often two pairs of electrodes are placed at the corners of the lower sheet, and a single connection to the upper sheet is used to sense the voltage that results from the user's touch. This design requires 5 connecting wires.

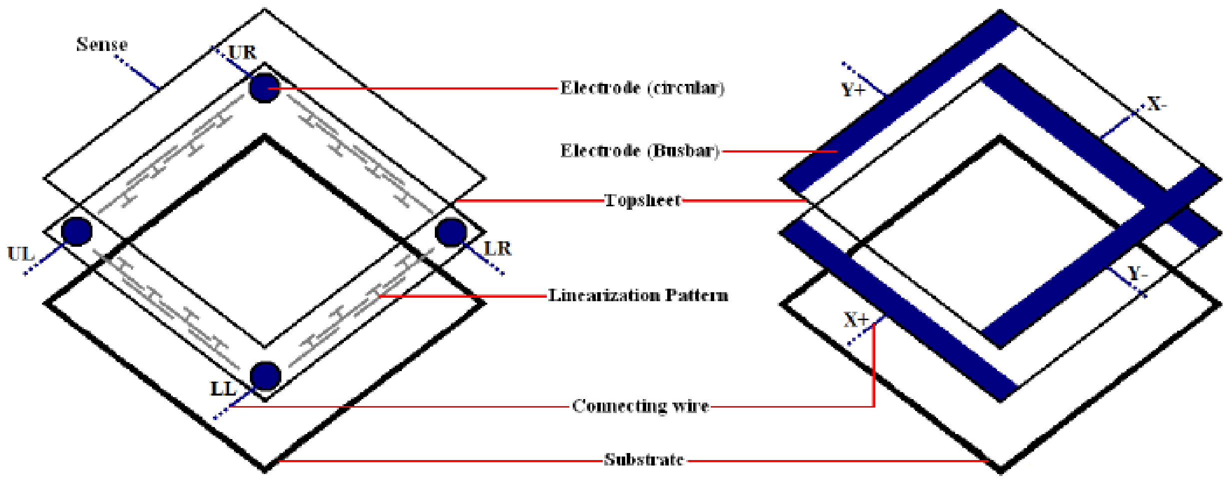

Figure 3 - Design differences between a five wire touchscreen (left) and a four wire touchscreen.

11. As discussed above, a set of location coordinates are generated by measuring sequentially for the X and Y axis the voltage which results from the voltage divider created by the user's touch. The numerical value of the coordinates reflects the digital encoding which is assigned by the analog to digital converter used to convert the voltage. Typically coordinate values range from 0 - 1024 in each axis. There is no intrinsic relationship between locations on the surface of the sheet and the values generated by the controller, since they are derived from properties of the sheet as a whole.

12. In practice, the voltage is alternately applied to each axis of the touch surface, and in each instance a measurement is taken for each axis so that coordinates of the location are determined. The location of the finger or other object expressed as its location in reference to the chosen coordinate system is referred to as the absolute position of the finger or stylus. In a typical resistive touch screen this operation is performed more than 100 times a second, and the absolute position may be reported for each measurement period. In addition, touch sensor may also

determine the relative position a finger or stylus by comparing the current location to the last known location and calculating the difference (e.g. ΔX, ΔY). Relative position information is often used to determine the movement of a cursor on a display screen when the touch sensor is a part of a touchpad

13. Often the function of determining the position of the touch on the resistive touch sensor is performed by a dedicated circuit or a microprocessor with firmware that performs the functions of sequencing the drive voltages to the sensor, measuring the values of the voltages in X and Y that result from a touch, and generating output data signals representing the user's input. These touch sensor controllers also perform filtering processes to eliminate inaccurate position data that may be generated when the user begins and ends their touch, or that may be generated by electrical noise. The touch sensor controllers also often have functions to scale the coordinates they output to match a specified numerical range, and to allow the origin of the coordinates to be specified so that the coordinate data output by the touch sensor controller can be aligned with an underlying display. Touch sensor controllers may also examine the sequence and timing of the user's contact with the surface, as determined by the controller's scanning of the sensor, in order to generate a simulation of the actions of traditional mouse buttons based on the user's interaction with the touch sensor.

14. Resistive touch sensors have the advantage of being very inexpensive to manufacture, and responsive to both finger touches and contact from a stylus. They can be manufactured in sizes from an inch square to over four by six feet, but they have several disadvantages. First off, the resolution of the coordinate data depends on the accuracy with which the voltage created by the voltage divider can be measured. For large resistive touch screens it can be difficult to maintain adequate spatial resolution. Also, the materials used for resistive touch sensors are less robust than the materials used for other types of touch sensors, less transparent, and the deflection of the material as the finger touches it makes the device have a different ergonomic feel than devices with harder surfaces. Finally, resistive sheet touch sensors cannot detect the position of the user's finger as it approaches the touch sensor, or is held in close proximity to the sensor. In addition, the resistive sheet sensors cannot determine the correct position if the user touches the sensor at two or more locations.

Capacitive Touch Sensors

15. For capacitive sensing technologies, I expect that I will describe the physical components of an exemplary device and explain the theory of operation in which such a device senses a user contact, determines the location of that contact and tracks movement of the contact until it is terminated. That description will include a description of the analog signals developed by a capacitive touch panel, the conversion of those analog signals into digital form, and the processing of those digital values to arrive at location coordinates, including known methods for filtering out unintended or "noise" values.

16. Capacitive touch sensors utilize the fact that a human body is conductive, acts like a capacitor, and affects the capacitance of conductive objects close to the body. There are several different kinds of capacitive touch sensors. In a simple implementation analogous to the resistive touch sensor, a single sheet of partially conductive material is driven with a rapidly changing voltage on its four corners. When the user touches the sensor, a minute amount of alternating current flows into the user's finger as a result of the user's body capacitance. The relationship between the voltage and position, at the particular frequency, is analogous to the relationship between the voltage and position for a five wire resistive touch sensor. Because the effective resistance at the sensing frequency in the circuit formed at the touch point is fixed for the duration of the measurement, the ratio of the currents flowing into the electrodes relative to the total current is proportional to the position, in both axes, of the touch. This sensing approach provides a very rapid way to determine the location of the user's touch, but in practice it is difficult to implement. As with resistive sensors, the accuracy of the X and Y coordinates depends on how accurately the currents can be measured, and on how even the resistance of the touch sensor surface coating is. Precise measurement of the currents of the drive signals is also difficult, due to the presence of electrical noise in the environment, and the tendency for the noise and other electromagnetic effects to distort the electric field on the surface of the sheet. Like the resistive touch sensors, a numerical value of the coordinates for the touch location is determined by converting the analog current measurements into digital values and performing the necessary comparisons and calculations. Typically coordinate values range from 0 - 1024 in each axis. In other words, the touch surface can distinguish the location of the user's touch within approximately 1000th of the length of each axis of the touch screen. For a touchscreen which is ten inches wide, the position of the user's finger can be determined within about one hundredth of an inch. . Advantages of this type of capacitive sensor include low cost, robustness since the sheet can be a very hard material, rapid sensing of the position of the user's finger, and very good transparency.

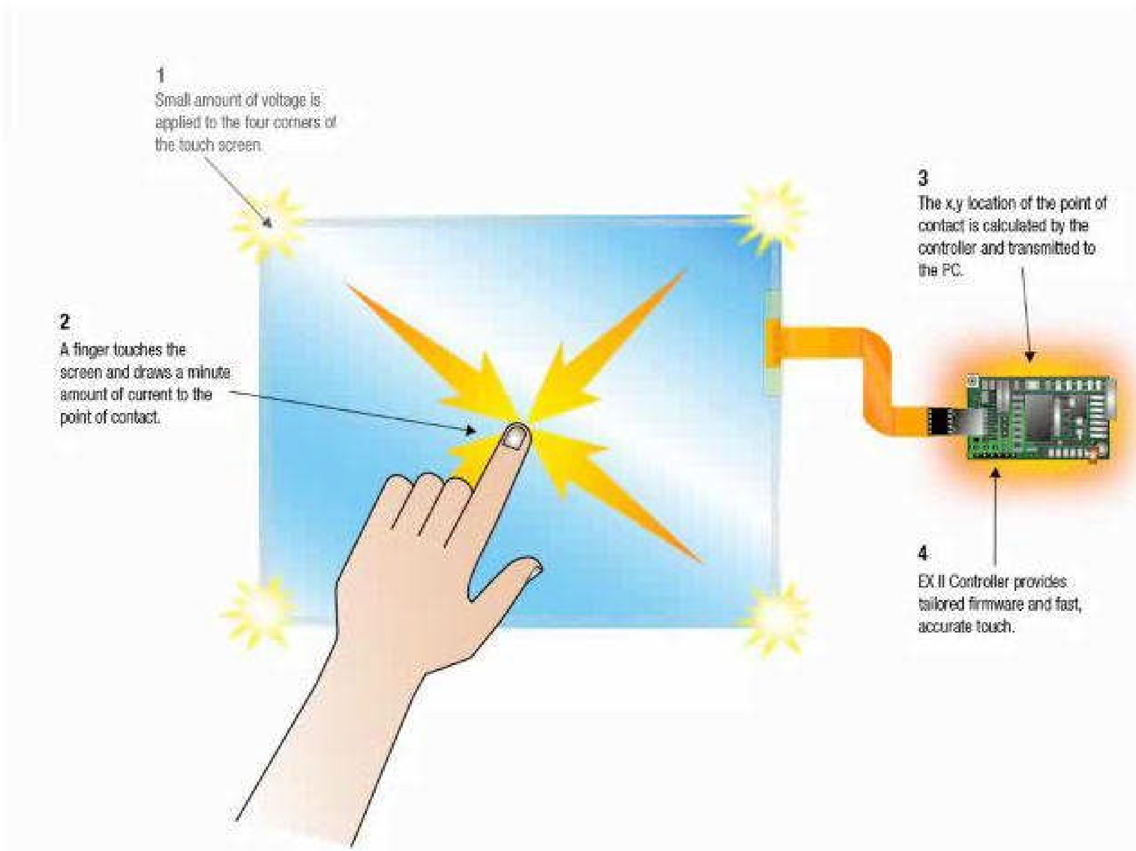

Figure 4 - An overview of how a surface capacitive sensor operates.

17. A more common type of capacitive touch sensor, often called a projected capacitance sensor, uses electrodes formed in a pattern underneath the surface where the user will touch. The touch sensor measures either the change in capacitance between electrodes, or the extent to which the signals in one or more electrodes are coupled to other electrodes as a result of the presence of the user's finger. The diagrams below show how the presence of the user's finger increases the capacitance between an electrode and its neighbor (shown as a ground plane in the simplified example in Figs. 5 and 6).

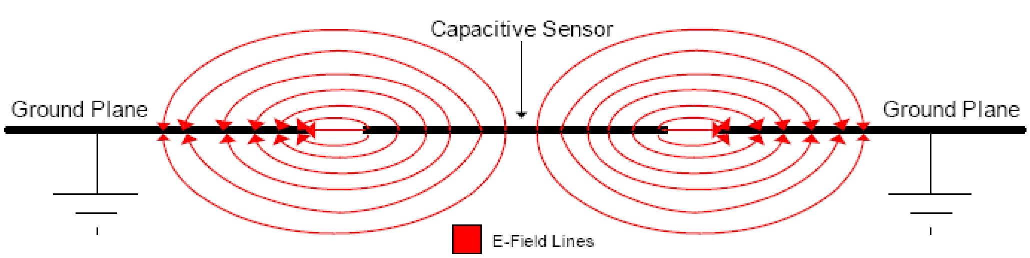

Figure 5 - Electric field lines between electrodes before the user touches the sensor

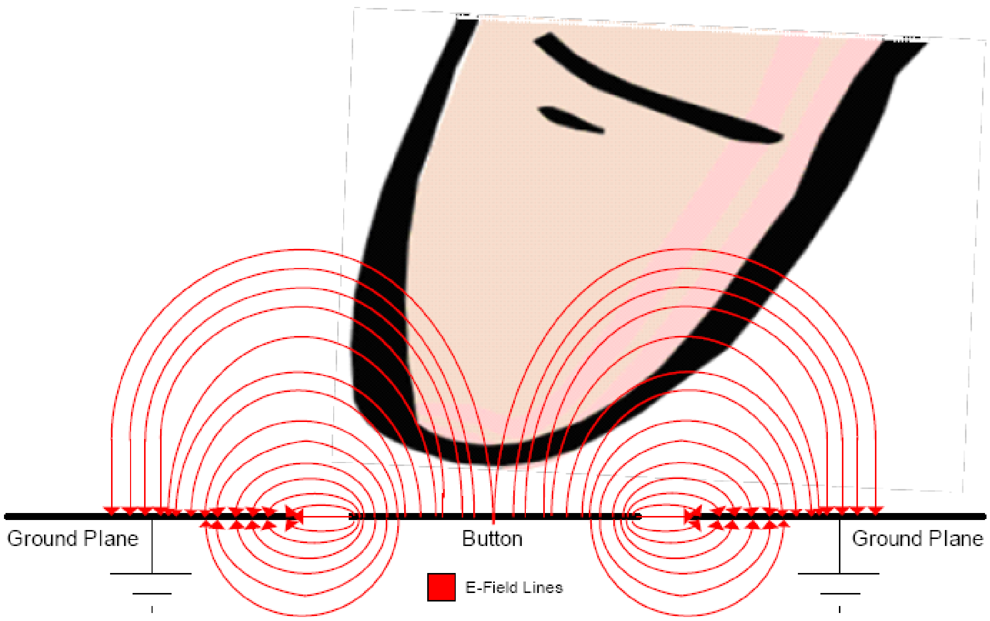

Figure 6 - The increased density of electric field lines increases the capacitance between the electrodes

18. A variety of different electrode patterns may be used, and the shape of the electrodes is an important aspect of the overall design of the sensor. Conceptually, however, for purposes of a basic understanding of the technology, the electrodes can be considered as a grid of lines running perpendicular to each other. The most common sensors are actually arrays of diamond shaped conducting elements. In this example, the blue diamonds are connected together along lines in the X direction, while the red diamonds a connected together along lines in the Y direction. Thus they are analogous to a grid of blue horizontal lines and red vertical lines, and are often discussed in this way by practitioners.

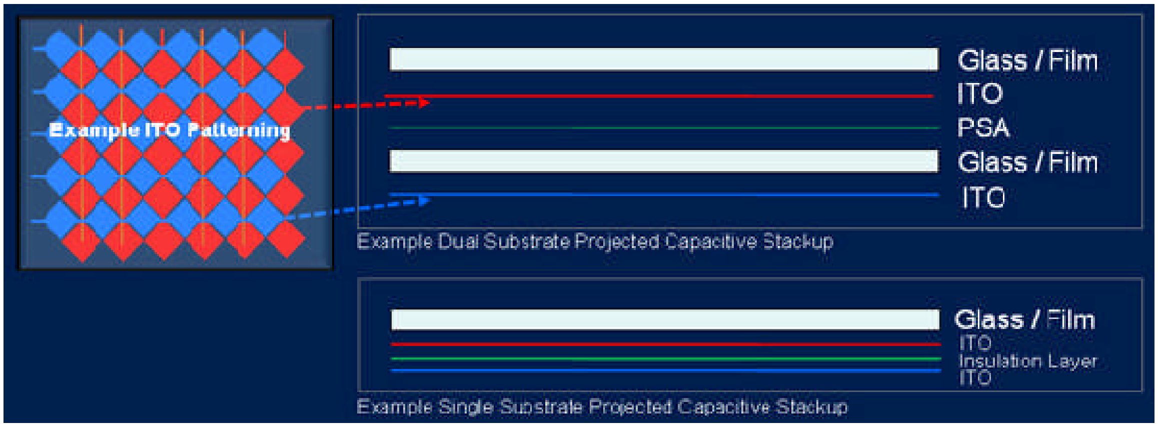

Figure 6 - A typical electrode pattern for a projected capacitance touch sensor, and cross section views of the sensor

19. For all of these sensors, the effect of placing a finger on or near the sensor electrodes is to create a varying amount of capacitance or capacitive coupling that is related to the distance from the electrode to the finger. In order to determine the location where the user is touching, the capacitive coupling (or the change in capacitance) is measured by scanning the sensor elements. The capacitance measured at each sensor trace is converted from an analog signal into a digital value. Once all of the sensor traces have been scanned and converted, the result is a number of capacitance values in each of the x and y directions. The controller then analyzes this data to determine the finger location and other operative data, such as the amount of pressure applied to the surface. In the simplest possible design the single line with the greatest capacitance change is used as the coordinate in each direction (X or Y). Such a sensor would only provide a very limited set of locations, e.g. no more that the number of grid lines for each axis.

20. In reality, the determination of finger location is a more complex calculation. Capacitive touch sensors are able to use the measurements of the amount of the change in capacitance at a set of neighboring electrodes to determine the location of the contact with much greater precision. The measured capacitance can be visualized as a graph with capacitance plotted against the dimensions of the touch surface. Graphs may show capacitance in the X and Y directions separately, resulting in a pair of curves, or simultaneously, as a “hill”. Capacitive touch sensors typically determine the finger location by calculating the coordinates of the centroid of the curve or “hill”. The centroid for an axis is calculated by adding up the products of the change in capacitance at each sensor trace, multiplied by the coordinate of the trace, and then dividing that total by the total of the changes in capacitance. Note that the accuracy of determining the location for a projected capacitance sensor depends on the accuracy with which its

controller can measure the change in capacitance (or coupling) between electrodes, not just the location or number of electrodes.

21. The pressure applied for each contact, called "z" data, can be determined by calculating the width under the curve or the area under the hill, because the harder a finger is pressed, the more it will spread out, contacting a greater area of the touch surface.

22. The illustration below shows the profiles of capacitance that would occur when three fingers are placed on a capacitive touch sensor.

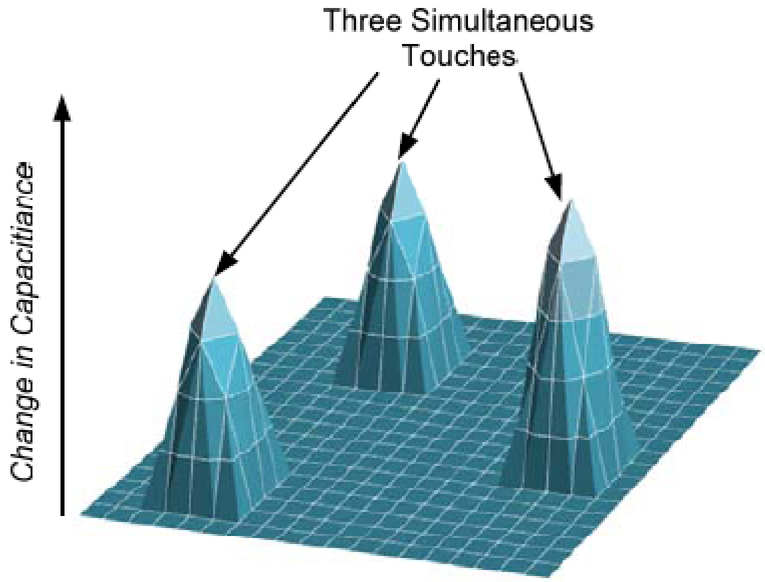

Figure 7: An example of how fingers touching a projected capacitance touch sensor affect the capacitance on the surface.

23. Capacitive touch sensor controllers also perform a number of processing steps to ensure that the positional, touch presence, and button simulation data that they report are as accurate as possible, and provide data in a format that is most useful to the system receiving the input data reports. Touch screen controllers typically filter the initial set of raw readings in order to remove noise, and then often further process or filter the coordinates they determine by averaging or other processes in order to output more stable, accurate position information. In addition, the controllers repeatedly scan the sensor to obtain position and touch data at a rate high enough so that the data they report represents the motion of the user's hand, and the number of fingers touching the sensor. Some projected capacitive touch sensor controllers also determine how many separate fingers or other body parts are touching the sensing surface, and what the locations and even

shapes of their areas of contact are. The controllers also examine the sequence and timing of the user's contact with the surface, as determined by the controller's scanning of the sensor, in order to generate a simulation of the actions of traditional mouse buttons based on the user's interaction with the touch sensor.

24. Practical advantages of this kind of capacitive touch sensor are the ability to use a variety of materials for the touch surface since the sensor can be built with the electrode pattern on a traditional printed circuit card mounted behind just about any non conductive material, or it can be formed from the patterned deposition of a transparent conductive material like indium tin oxide onto the back surface of a glass window. This type of sensor can also be used to determine the location of multiple points of contact, and it can recognize the approach of a finger and the presence of a finger very close to the surface. Analysis of the size and shape of the regions where high capacitive coupling exists can also be used to infer how hard the user is pressing on the surface.

PATENT CLAIM TERMS

The '352 Patent

25. For the '352 patent, I expect to provide a description of the invention described and how that invention is an improvement over known touchpads and methods of using touchpads. I also expect to testify that the constructions proposed by Apple for the claim elements "identify a first maximum…" identify a second maxima . . . and "identify a minima …" improperly add a limitation not present in the claims themselves and not required by any reading of the patent's written description or the file history.

26. In the previous litigation involving the '352 patent, these terms were construed to mean "identify a peak value in a finger profile obtained from scanning the touch sensor." I believe that is an adequate construction of the term. I understand that Apple proposes to alter that construction by including the requirement that the profile be "taken on an axis." I do not find that limitation in the claim language itself, nor do I find any support in the patent itself for that additional limitation. While the patent discloses an "exemplary embodiment" profiles taken on an axis, the patent also says it is not limited to the exemplary embodiment. One of ordinary skill in the art would have known that there are methods of scanning the touch sensors to create profiles other than along an axis would not understand the patent to show be limited to an analysis along one axis.

27. Rather, the '352 patent states that the detailed description is only an "exemplary embodiment." In addition, the patent describes the exemplary embodiment as a "simple" embodiment, 2:42-45, demonstrated by a "simplified" algorithm. 11:1. The patent discloses that many other implementations are possible. For example, the patent emphasizes that the sensors may be scanned sequentially or simultaneously, and that the steps to determine maxima and minima, described as

in the x and then y direction, may be done simultaneously. If the x and y values are determined, filtered, smoothed and stored in data structure simultaneously, one of ordinary skill in the art would have understood that a matrix of data values for each x and y point would be created. Determining the maxima and minima values in that structure in both directions simultaneously would not proceed in an "angular" direction. For at least these reasons it is my opinion that the additional requirement of "angular direction" is not a technically correct requirement of claims 1 or 18 of the 352 patent.

28. I also do not agree with "select" to mean "selection of an item." That definition is unduly limiting. In GUIs "selection" may be an item; it may be a block of text, one or more cells in a spreadsheet or a part of a document or image. In general the "select" function has a well understood meaning to those skilled in the art, which includes indicating an item or area displayed.

29. I also may testify regarding the "means-plus-function" claim elements in claim 18 and the claims that depend from it. I understand that a means plus function limitation is understood to encompass the structures disclosed in the specification, and their equivalents, for performing the required function. I may testify that the patent does disclose sufficient structure for the functions of "selecting an appropriate control function" (claim 19), "determining a distance between the first and second maxima" (claim 24), "providing a click function" (claim 26), and "calculating a first and second centroid" (claim 30).

30. The patent discloses that the exemplary algorithms shown in the patent, including Fig. 6, may include a step for calculating the centroid for each finger. 10:31-45. The term "centroid" and the centroid calculation to determine the precise coordinates of finger contact were well known to those skilled in the art and included in nearly all prior art touchpads. As such, this structure – a firmware or software routine running on the touchpad controller or host computer to determine a centroid – is disclosed and well defined to one of ordinary skill in the art.

31. The patent also discloses that firmware or software may be programmed to perform the function of selecting a click function or any other appropriate control signal. The patent gives a number of examples of such control signals in Figs. 7 – 9 and related text. Those examples include emulating mouse button click and double click signals, selecting an object, dragging an object and other traditional input functions. The click function is included in the algorithm disclosed in Figs. 8 and 9. The patent also discloses that any series of finger movements, taps and the like involving one or more than one finger can be analyzed in firmware or software on the touchpad or on the host to implement any necessary control function. Determining a control function and writing a software or firmware routine to interpret contact sequences to implement that control function was well within the knowledge of those skilled in the art at the time of the '352 patent.

The '353 Patent

32. For the '353 patent I expect to provide a more detailed description of the invention described and the improvements it made over the prior art of record.

33. I may also provide my opinion regarding the meaning of the term "pattern" as used in the phrases "a first pattern on said panel for representing a mode switch . . ." in claims 1, 4, 7 and 10. In particular, it is my opinion that this term is not limited to a printed graphic as Apple contends. In particular, the patent states only "[u]sually, the key, word and symbol" patterns for the various mode switch areas are printed, but also says that other methods of displaying those patterns are "within the scope of the present invention." One of ordinary skill in the art would have known that among the other display methods would be to display that pattern on the touch panel using an underlying display screen. That is disclosed in the patent, where the "plurality of second patterns" representing numerical keys, the alphanumeric keyboard, etc. are changing displays created by the underlying LCD screen. As such, Apple's proposed construction of at least the "second pattern" limitations is directly contradicted by the patent specification.

34. In my opinion Apple's construction of the term "a plurality of regions defined on said panel" is only partial. While a plurality of regions defined on the touchpad requires one or more specific regions, the patent discloses that those regions are "defined" by the images displayed on the panel depending on the mode in which the panel is being operated. 2:41-3:31; Figs. 1 and 2.

The '218 Patent

35. I may provide a general technical overview of the systems described in Apple's '218 patent. If necessary, I will rebut any descriptions or opinions offered by any witness identified by Apple that I consider to be incorrect.

36. I may provide my opinion that the term "cursor control operation" means "providing cursor positioning data to effect movement of the cursor." One of ordinary skill in the art would understand that term on its face to involve the control, i.e. movement, of the cursor on a display screen. That understanding is confirmed by the patent. At 6:9-13 the '218 patent expressly states that a "cursor control operation" is a cursor tracking operation. That is, an operation that controls the movement of the cursor on the screen.

37. I may also testify as to my opinion on the meaning of the term "means for detecting contact intervals." I understand the function of this term is to detect the period of time during which there is continuous user contact with the touchpad. The structure disclosed in the patent as necessary to perform this function are balance measurement circuit 215, balance ration determination circuit 200 and microcontroller 225, with hardware circuitry, firmware or software (running on either the microcontroller 225 or on the host computer) encompassing the

algorithm shown in Figs. 4 – 9 and discussed in the associated text. Not shown but understood to be included in the circuitry of Fig. 1 would be at least one clock signal. One of ordinary skill in the art would understand how to determine a time interval between events using count up or count down timing algorithms. All of these elements are necessary to determine the existence and length of a user's contact with the touchpad. Apple's definition is incorrect because it only identifies a part of the necessary structure. While some logic to determine the elapsed time between the start and end of the contact is necessary, the other elements discussed herein are also necessary.

38. I may testify regarding the "means for detecting gap intervals" limitation. In this limitation the function is to determine the length of time between user contacts with the touchpad. The structure disclosed in the patent as necessary to perform this function are balance measurement circuit 215, balance ration determination circuit 200 and microcontroller 225, with hardware circuitry, firmware or software (running on either the microcontroller 225 or on the host computer) encompassing the algorithm shown in Figs. 4 – 9 and discussed in the associated text. Not shown but understood to be included in the circuitry of Fig. 1 would be at least one clock signal. One of ordinary skill in the art would understand how to determine a time interval between events using count up or count down timing algorithms. All of these elements are necessary to determine the length of time between a user's contact with the touchpad. I also understand that the claim would encompass equivalent structures.

39. I may testify regarding the "means for distinguishing . . . and reporting" limitation. In this limitation the function is distinguishing between a first cursor control operation, a second cursor control operation and a third cursor control operation based on the duration of said contact and gap intervals and reporting one of said first, second or third cursor control operations. The corresponding structure includes the balance measurement circuit 215, balance ration determination circuit 200 and microcontroller 225 and hardware logic, firmware of software that takes as input the signals generated by user contact with the touchpad, determining the beginning and end of such contact and the timing of those events, and then distinguishes among various contact and gap intervals and reports button state and cursor movement data to a host. Such algorithms are shown in Figs. 4 – 9 of the '218 patent and associated text. I understand that the claim would also encompass equivalent structures to those disclosed.

The '659 Patent

40. I may provide a general technical overview of the systems described in Apple's '659 patent. If necessary, I will rebut any descriptions or opinions offered by any witness identified by Apple that I consider to be incorrect.

41. I may provide in my opinion that, "Native sensor coordinates" are coordinates indicating the absolute position of an object on or near the touch pad. Those

coordinates (x,y, r,θ, etc.) are calculated from the data acquired from the sensors and reflect a point on the surface of the touchpad. *See* 5:38-48. Apple's proposed construction does not clarify or further define this term. Rather, Apple substitutes the term "sensor coordinates of the touchpad" for the claim term "native sensor coordinates." I am not certain what Apple means by "sensor coordinates of the touchpad" and so do not know if there is a disagreement between the parties.

42. I may also testify that "Sensors configured to map the touchpad surface into native sensor coordinates" means sensors configured to produce signals indicating native sensor coordinates. The mapping of the surface into native sensor coordinates depends upon the type of sensor, and the design of the sensing electronics as discussed.

43. I may offer in my opinion that "logical device units" would be understood by one of ordinary skill in the art to mean "discrete user actuation zones representing areas of the touchpad encompassing groups of native sensor coordinates." This definition is consistent with the usage of this term by those skilled in the art and with the description in the patent.

44. I may also provide my opinion that the term "filtering" means "deciding whether new values are reported to the host based on the native values." While "filtering" would be broadly understood to encompass many operations to remove unwanted signals or signal frequencies, this definition is consistent with the use of this term in the claim itself and as it is used in various parts of the patent, for example at 6:4-28. It is also the way this term is used by the applicant during prosecution. *See e.g.* October 2, 2008 Amendment at 10. In each of these examples the patent makes clear that the filtering is done based on the native sensor coordinates and involves a decision whether or not to report new values to the host.

The '929 Patent

45. I may also testify regarding the meaning of the term "housing" in claims 10-3 and 15-17 of the '929 patent would have to one of ordinary skill in the art. It is my opinion that "housing" would be understood to mean "a rigid structure enclosing the components and circuitry of a device" that includes the touchpad. The patent makes clear that a bracket structure that supports a touchpad from the interior of the device enclosure is not a "housing" as that term is used in the patent. This meaning is consistent with the use of the term in the patent. *See, e.g.* 1:18-28. While the patent claims are not limited to the mounting of a touchpad in a computer, in the context of portable computers the patent clearly refers to the

palm rest as part of the base "housing." The patent is clear and unequivocal in stating that a bracket that holds a touchpad from within the palm rest portion of the housing is not the claimed invention. *See, e.g.* 8:7-17.

Dated: February 22, 2010

___*/s/ Robert Dezmelyk*________________
Robert Dezmelyk

Citations for illustrations:

Figure 1 - 3: Atmel Applications Note AVR341 Four and five wire Touch Screen Controller © 2007 Atmel Corporation

Figure 4: Surface Capacitive Touch - 3M website
http://solutions.3m.com/wps/portal/3M/en_US/TouchSystems/TouchScreen/Technologies/Touch/

Figure 5, 6: Cypress Semiconductor, Capacitive Sensing 101, published Oct. 2006

Figure 7: Projected Capacitance Touch Screen Technology
http://www.oculardisplaysystems.com/touch-screen/crystal-touch-article.asp