

# EXHIBIT U

**CONTAINS CONFIDENTIAL BUSINESS INFORMATION  
SUBJECT TO PROTECTIVE ORDER**

**UNITED STATES INTERNATIONAL TRADE COMMISSION  
WASHINGTON, D.C.**

**Before the Honorable Theodore R. Essex  
Administrative Law Judge**

In the Matter of

CERTAIN MOBILE DEVICES AND  
RELATED SOFTWARE

Investigation No. 337-TA-750

**CORRECTED WITNESS STATEMENT OF DR. RAVIN BALAKRISHNAN**

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are described as “shape, size, and position parameters.” '828 Patent at 25:54-56.

**QUESTION 442: Let's turn to CDX-01.531. What is shown here?**

**ANSWER:** CDX-01.531 has a table listing each party's proposed construction of “mathematically fit(ting) an ellipse,” which is a term in Claims 1 and 10. The issues regarding this claim term are the same as those for the “mathematically fit(ting) an ellipse to at least one of the pixel groups.”

**QUESTION 443: How have the parties construed “mathematically fit(ting) an ellipse”?**

**ANSWER:** Apple has construed “mathematically fit(ting) an ellipse” as “comput(ing) numerical parameters that mathematically define an ellipse.” Motorola has construed “mathematically fit(ting) an ellipse” as “applying a unitary transformation of the group covariance matrix of second moments of proximity data to fit an ellipse.” The Staff has construed “mathematically fit(ting) an ellipse” as “computing numerical parameters that mathematically define an ellipse.”

**QUESTION 444: In your opinion, what is the correct construction of “mathematically fit(ting) an ellipse”?**

**ANSWER:** Apple's proposed construction is correct because one of ordinary skill in the art would have understood that “mathematically fit(ting) an ellipse” meant comput(ing) numerical parameters that mathematically define an ellipse.

**QUESTION 445: What are the excerpts from the specification shown here on CDX-01.531?**

**ANSWER:** CDX-01.531 shows additional excerpts from the '828 Patent specification. At column 25 line 54 through column 26 line 67, the '828 Patent specification describes a set of specific mathematical formulas for an embodiment of ellipse fit(ting), which are identified as equations 12-23. On CDX-01.531, I've reproduced equations 19 through 21, where the computed numerical parameters are major axis lengths and orientation. One of ordinary skill in the art would understand these formulas to be examples of ellipse fit(ting) , and would have known that other known formulas could be used to fit an ellipse. At column 27 lines 1 through 8, the '828 Patent specification further describes another embodiment for low resolution electrode arrays where the “total group proximity  $G_z$  is a more reliable indicator of contact size as well as finger pressure.” One of ordinary skill in the art would understand that this process was an alternative to equations 15-22 for extracting shape, size, and position parameters from a pixel group. In this “low resolution” embodiment, the orientation and eccentricity are set to default values, so this embodiment

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still mathematically defines an ellipse. A circle is a special case of an ellipse with a defined orientation and eccentricity.

**QUESTION 446:** In your opinion, are Apple's proposed construction for “mathematically fit(ting) an ellipse” and “mathematically fit(ting) an ellipse to at least one of the pixel groups” consistent with the '828 Patent specification?

**ANSWER:** Yes, they are.

**QUESTION 447:** Do you agree with Motorola's proposed constructions for “mathematically fit(ting) an ellipse” and “mathematically fit(ting) an ellipse to at least one of the pixel groups”?

**ANSWER:** No, I do not agree with Motorola's proposed construction for “mathematically fit(ting) an ellipse” and “mathematically fit(ting) an ellipse to at least one of the pixel groups” because Motorola's proposed construction is not consistent with the understanding of one of ordinary skill in the art.

**QUESTION 448:** In your opinion, why is Motorola's proposed construction inconsistent with the understanding of one of ordinary skill in the art?

**ANSWER:** The specific mathematical formulas disclosed in the specification, which require operations on a covariance matrix, are only one example of ellipse fit(ting). Motorola points to the file history, but as shown on CDX-01.532, the file history does not reference any of the specific mathematical formulas in Motorola's proposed construction. There is no explicit definition for “ellipse fitting” in the specification or the file history. This is further supported by dependent claims 5 and 15, which refer to eigenvalues and eigenvectors of a covariance matrix. I understand claims 1 and 10 to be broader than these dependent claims, and one of ordinary skill in the art would thus understand that these specific mathematical formulas are not necessary for “mathematically fit(ting) an ellipse.”

**(ii) “means for fit(ting) an ellipse to at least one of the pixel groups” (Claim 24)**

**QUESTION 449:** Please turn to CDX-01.533. What is shown here?

**ANSWER:** CDX-01.533 has a table listing each party's proposed construction of the structure of this term according to § 112 ¶ 6 function and the structure of “means for fit(ting) an ellipse to at least one of the pixel groups,” which is a term in Claim 24. CDX-01.533 also shows excerpts from the '828 Patent specification.

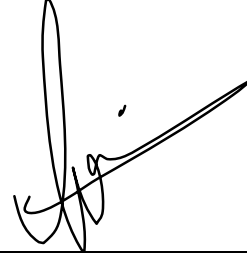
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these processes practice the claim under all constructions for  
“mathematically fit an ellipse.”

**QUESTION 608:** Does this Witness Statement contain your answers to the foregoing  
questions from counsel?

**ANSWER:** Yes.

Dated: August 22, 2011



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Ravin Balakrishnan