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13 Attorneys for SAMSUNG ELECTRONICS  
CO., LTD., SAMSUNG ELECTRONICS  
14 AMERICA, INC. and SAMSUNG  
TELECOMMUNICATIONS AMERICA, LLC  
15

16 UNITED STATES DISTRICT COURT

17 NORTHERN DISTRICT OF CALIFORNIA, SAN JOSE DIVISION

18 APPLE INC., a California corporation,

19 Plaintiff,

20 vs.

21 SAMSUNG ELECTRONICS CO., LTD., a  
Korean business entity; SAMSUNG  
22 ELECTRONICS AMERICA, INC., a New  
York corporation; SAMSUNG  
23 TELECOMMUNICATIONS AMERICA,  
LLC, a Delaware limited liability company,

24 Defendants.  
25

CASE NO. 11-cv-01846-LHK

**DECLARATION OF BRIAN VON  
HERZEN, PH.D. IN SUPPORT OF  
SAMSUNG'S MOTION TO STRIKE  
EXPERT TESTIMONY BASED ON  
UNDISCLOSED FACTS AND THEORIES**

Date: June 21, 2012

Time: 10:00 a.m.

Place: Courtroom 5, 4<sup>th</sup> Floor

Judge: Hon. Paul S. Grewal

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Case No. 11-cv-01846-LHK

**DECLARATION OF BRIAN VON HERZEN, PH.D. IN SUPPORT OF SAMSUNG'S  
MOTION TO STRIKE EXPERT TESTIMONY**

1 I, Brian Von Herzen, declare:

2 1. I am the Chief Executive Officer of Rapid Prototypes, Inc., an electronics  
3 consultancy specializing in the research, design and development of commercial electronic  
4 products, and have been with the company since 1994. I have been asked to provide an expert  
5 declaration on behalf of Samsung Electronics Co., Ltd., Samsung Electronics America, Inc., and  
6 Samsung Telecommunications America, LLC (collectively, “Samsung”) in the above-captioned  
7 case.

8 2. I have previously submitted expert reports in the above-captioned case. I submit  
9 this declaration in support of Samsung’s Motion to Strike Expert Testimony Based on Undisclosed  
10 Facts and Theories. If asked at hearings or trial, I am prepared to testify regarding the matters I  
11 discuss in this declaration.

12 3. I reserve the right to supplement or amend this declaration based on any new  
13 information that is relevant to my opinions.

14 4. I am being compensated for my work in this matter at the rate of \$575 per hour plus  
15 expenses. My compensation is in no way tied to the outcome of this matter.

16 I. MY PROFESSIONAL AND EDUCATIONAL BACKGROUND

17 5. A detailed record of my education and professional qualifications is attached as  
18 Exhibit 1 to this declaration and summarized below.

19 6. I received a Bachelor’s degree from Princeton University in 1980 in Physics. I  
20 received a Master of Science degree in 1984 and a Ph.D. in 1989 from the California Institute of  
21 Technology (“Caltech”) in Very-large-scale integration (“VLSI”) and Computer Graphics.  
22 During and after my graduate studies, part of my research required the design and development of  
23 multiple custom integrated circuits. At Caltech, I was awarded a Hertz Foundation Fellowship  
24 and a Hughes Foundation Fellowship.

25 7. From 1992 to 1994, I worked for Synaptics, Inc. in the engineering of electronic  
26 circuits for human interface devices such as the TouchPad, which was developed by Synaptics in  
27 the 1990s. I have substantial industry experience in the design and manufacture of touch sensing  
28 devices, including transparent touchscreens.

1           8.       At Rapid Prototypes, Inc., I specialize in the research, design and development of  
2 commercial electronic products. Over the past two decades, I have designed dozens of electronic  
3 systems for several Fortune 500 companies, including human interface devices, signal processing  
4 systems, and graphics and video processing systems.

5           9.       I am an inventor on approximately a dozen electronics patents and have  
6 approximately a dozen additional patents pending.

7           10.      I am a member of the Institute of Electrical and Electronic Engineers (IEEE), and  
8 am the author or co-author of published articles related to signal processing and computer  
9 graphics. I have given numerous invited seminars at leading conferences and institutions around  
10 the world on the topics of digital signal processing, electronic systems engineering, and hardware /  
11 software co-design.

12 **II.     THE APPLE '607 AND '129 PATENTS**

13           11.      I have reviewed U.S. Patent Nos. 7,663,607 (“the ‘607 Patent”) and 7,920,129 (“the  
14 ‘129 Patent”) in connection with my work in the above-captioned case.

15           12.      On March 22, 2012, I submitted my opening expert report on the invalidity of the  
16 ‘607 Patent and the ‘129 Patent.

17           13.      On April 5, 2012, I submitted a corrected version of my opening expert report.

18           14.      On May 18, 2012, I submitted a supplemental opening report on the invalidity of  
19 the ‘607 Patent and the ‘129 Patent.

20           15.      On April 16, 2012, I submitted my rebuttal expert report on Samsung’s non-  
21 infringement of the ‘607 Patent and the ‘129 Patent.

22           16.      The ‘607 Patent, entitled “Multipoint Touchscreen,” was filed on May 6, 2004, and  
23 issued on February 16, 2010. The patent has three named inventors: Steve Hotelling, Joshua A.  
24 Strickon and Brian Q. Huppi. The ‘607 Patent is attached as Exhibit 2 to this declaration.

25           17.      The ‘607 Patent relates to a touch panel having a “transparent capacitive sensing  
26 medium” configured to detect multiple touches or near touches that occur at the same time and at  
27 distinct locations on the touch panel, and to produce distinct signals representative of those  
28 touches. Generally, the sensing medium includes two layers of conductive traces arranged in a

1 grid that are physically separated from each other by an insulator. Monitoring circuitry, which  
2 may include a “virtual ground charge amplifier,” is coupled to the touch panel and used to detect  
3 multiple touches or near touches that occur at the same time and at distinct locations on the  
4 sensing medium. The monitoring circuitry measures the change in charge coupling between the  
5 two sets of conductive lines. As such, the ‘607 Patent describes and claims a *mutual capacitive*  
6 type of sensing technology for use in a capacitive touchscreen.

7 18. The ‘129 Patent, entitled “Double-Sided Touch-Sensitive Panel with Shield and  
8 Drive Combined Layer,” was filed on January 3, 2007, and issued on April 5, 2011. The ‘129  
9 Patent has two named inventors: Steve Hotelling and Brian Land. The ‘129 Patent is attached as  
10 Exhibit 3 to this declaration.

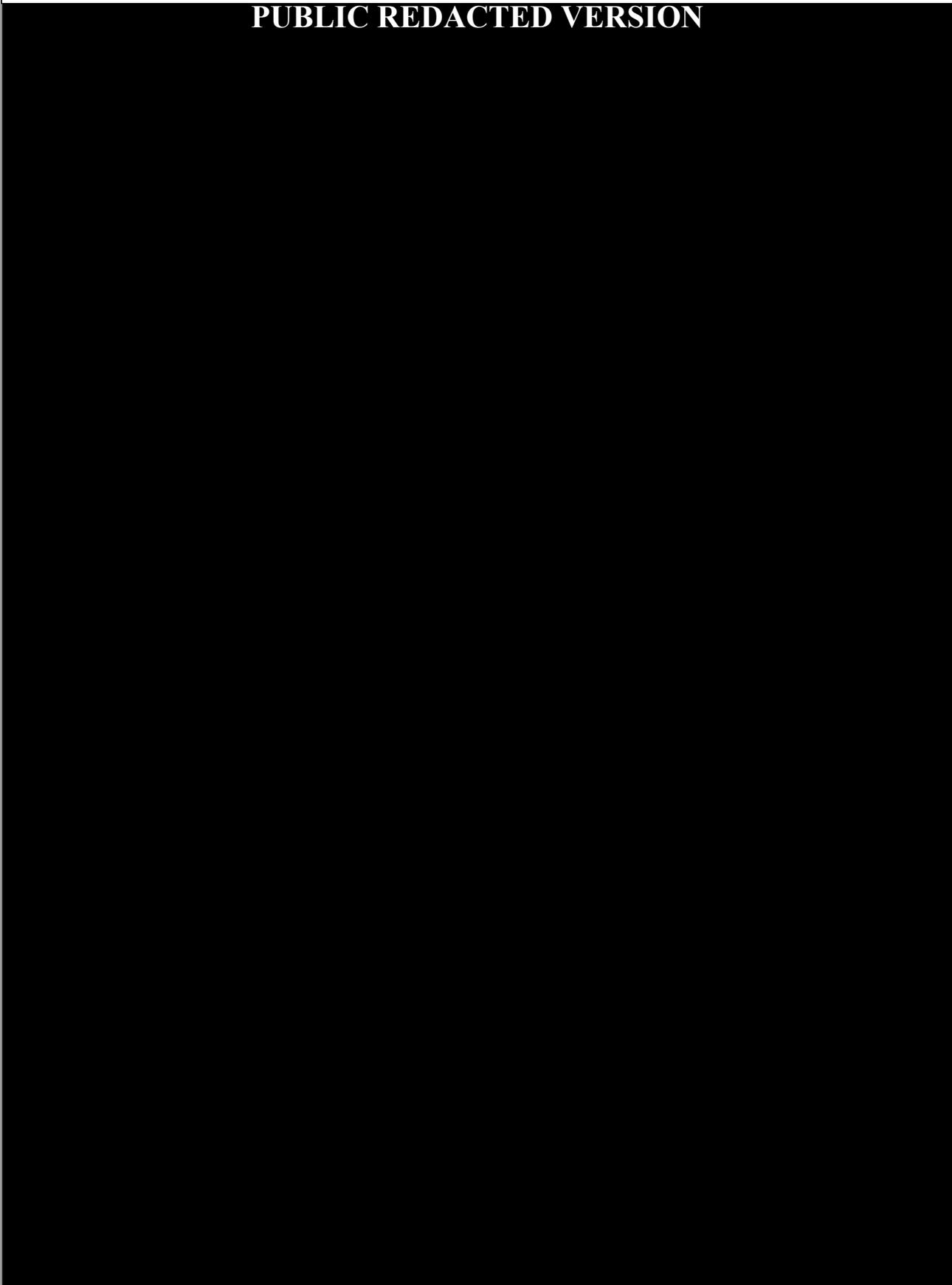
11 19. The ‘129 Patent relates to capacitive touch sensor panels having row and column  
12 traces separated by a substrate, much like the two sets of conductive lines described and claimed  
13 in the ‘607 Patent. The row traces can be widened for shielding purposes and for providing a  
14 uniform appearance. In some embodiments of the ‘129 Patent, “the row traces can be widened to  
15 shield the column traces from a modulated Vcom layer.” (‘129 Patent at 2:59-60). The ‘129  
16 Patent also describes and claims a *mutual capacitive* type of sensing technology for use in a  
17 capacitive touchscreen.

18 20. Both the ‘607 Patent and the ‘129 Patent relate to capacitive sensing used to detect  
19 a touch or near touch on a sensing medium.



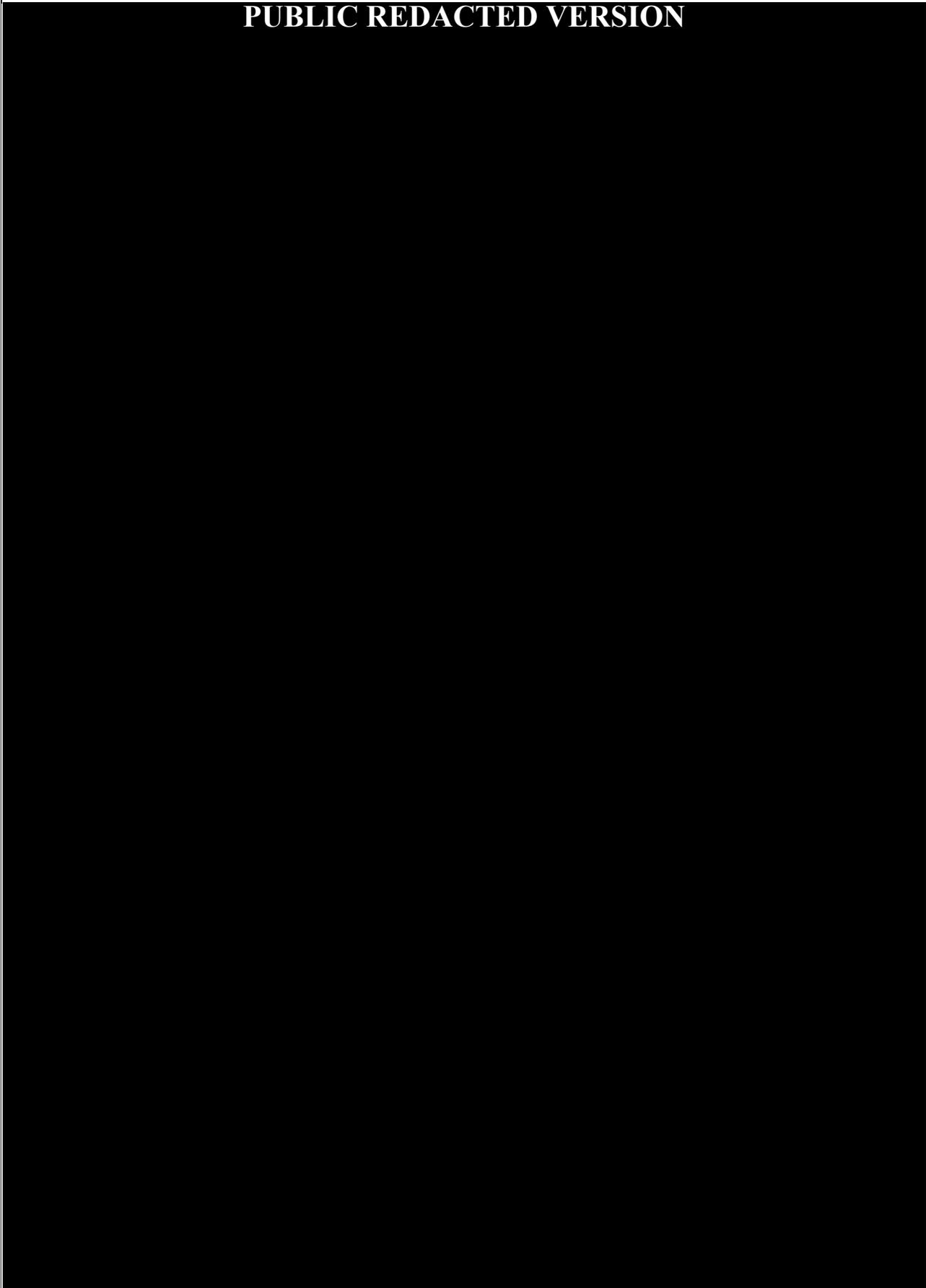
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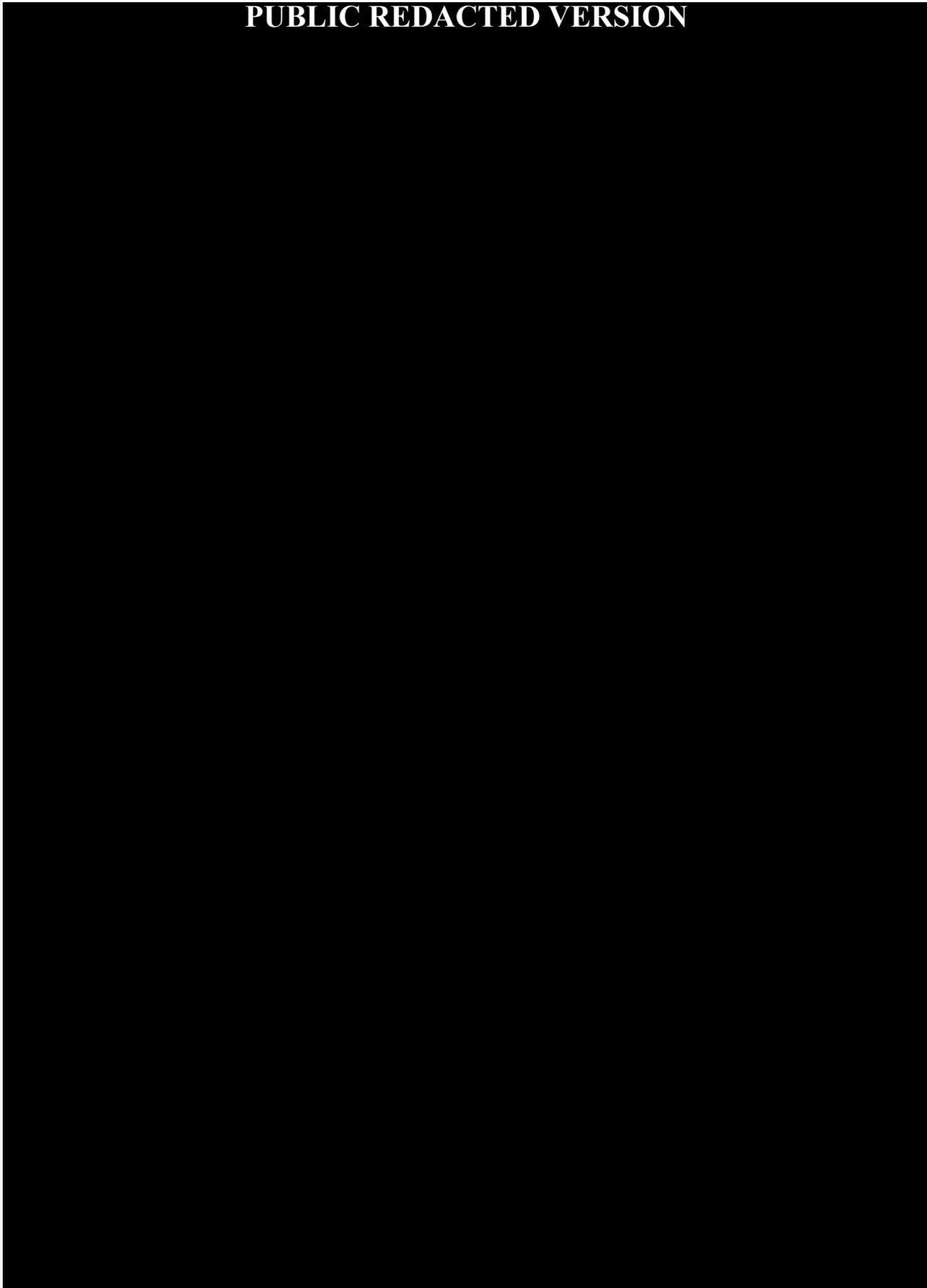
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I declare under penalty of perjury that the foregoing is true and correct. Executed in Santa Clara County, California on June 7, 2012.



Brian Von Herzon