

In re RYAN MADDEN,            )  
Petitioner,                    )  
                                      )  
On Habeas Corpus            )  
\_\_\_\_\_                          )

Affidavit of Gary Robertson

I, Gary Robertson, declare as follows:

1. I am a principal in and owner of Gary Robertson & Associates, Inc., and in that capacity provide services in the field of close range photogrammetry to government entities, including law enforcement agencies, private industry and individuals. I am a member of the American Society of Photogrammetry and a board certified registered photogrammetrist. I have testified and been qualified as an expert witness in photogrammetry in judicial proceedings in the United States, including California, and in Canada. A Curriculum Vitae which provides a summary of my professional activities and accomplishments is included at the end of the Report that is attached to this Affidavit as Exhibit A.

2. Photogrammetry is the science and technology of obtaining reliable information about physical objects through processes of recording, measuring and interpreting photographic images. Close range photogrammetry, also referred to as terrestrial photogrammetry, is the application of photogrammetry to measure physical objects from or near

ground level in photographs taken from a close distance. One of the specific applications of close range photogrammetry is the measurement of an individual depicted as a photographic image for purposes of identification. The measurements that can be determined through close range photogrammetry in order to positively identify or "individualize" images of people include height and facial feature measurements.

3. Attached to this Affidavit as Exhibit A is a Report I personally authored that employs close range photogrammetry to determine the height and facial feature measurements of: (1) digital frames (photographs) of images depicting an individual at the location of an automatic teller machine (ATM) from two separate ATM cameras (referred to as the subject image(s) or subject frame(s)); and (2) digital frames of images depicting an individual at that location from a Nikon E8700 camera (referred to as the control image(s) or control frame(s) ) who I have been told is Ryan Madden. The Report (Exhibit A) first explains general principles of photogrammetry and goes on to explain in detail the methodology by which those principles and techniques were applied to generate the resulting measurement data as to height and facial features of the individual depicted in the subject images and the individual depicted in the control images.

4. In conducting the analysis, I examined five separate frames, two of which were the subject images and three of which were the control images. Copies of the five separate frames are appended to my Report and are also reproduced in the body of the Report. (Pages 1 and 2 of Appendix A is a copy of the one of the frames of the subject image and page 3 is a copy of the second frame of the subject image. Pages 4, 5 and 6 of Appendix A are copies of the three frames of the control images.) I was provided information as to

the cameras and lenses used in taking the digital frames by Chris Nicely (who I understand is a California licensed investigator), and Mr. Nicely also provided me with the measurements of the fixed features depicted in the digital frames

5. At the risk of oversimplification, the methodology employed in ascertaining the height of an image through close range photogrammetry entails using a fixed feature of known dimensions that is depicted in the frame as a means to measure the height of the image in question by a computer software program. Because the height of a person varies according to the spread between their legs, a person's height will vary in movement by a matter of millimeters. To take account of this difference in height, an average height is calculated when more than one image is available for analysis.

6. As I state in the Conclusion of the Report, the measurement data shows that the person in the subject frames (taken by the ATM cameras) is shorter than the person in the control image photos. (Exhibit A, Section 4.0.) More specifically, the height of the person depicted in the two subject photographs was determined to be 1712.618 millimeters (mm) (67.425 inches) and 1714.207 mm (67.485 inches), an average of 1713.412 mm (67.457 inches), whereas the height of the person depicted in the control photographs was determined to be 1782.104 mm (70.161 inches) and 1797.268 mm (70.758 inches), an average of 1789.592 (70.456 inches), for a difference of 76.180 mm (2.99 inches). (Exhibit A, Figures 4, 5 and 6.) The individual height measurements, and the average measurement, are accurate to +/- 2.0 millimeters (0.078 inches, less than a tenth of an inch).

7. As I also state in the Conclusion of the Report, the facial feature measurement data also differed. (Exhibit A, Section 4.0; Figures 7-13.) One

key identifier is the area of the "Adams" apple, or mid-throat edge line. The angle and orientation of the mid-throat edge line of the person depicted in the subject photograph is 116.20 degrees, and the angle and orientation of the mid-throat edge line of the person depicted in the control photographs is 137.32 degrees. (Exhibit A, Figure 11.) This is a difference of 27.12 degrees, or 15%, the difference being attributable to the prominent "Adams" apple of the person in the control photographs and the absence of that feature in the person in the subject photographs. (Exhibit A, Figure 11.)

8. The additional facial feature measurements, all of which differed between the person in the subject photographs and control photographs were the following:

a. nose to chin angle: 124.80 degrees (subject photograph) vs. 132.88 degrees (control photographs) (Exhibit A, Figure 7);

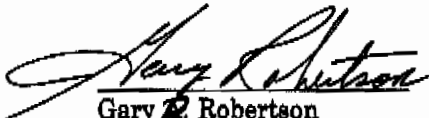
b. ear length: 73.88 mm (2.906 inches) (subject photograph) vs. 67.19 mm (2.645 inches) (control photographs) (Exhibit A, Figure 8);

c. area: 12885.20 mm (507.291 inches) (subject photograph) vs. 11137.65 mm (438.490 inches) (control photographs) (Exhibit A, Figure 9);

e. ear to eye distance: 81.59 mm (3.212 inches) (subject photograph) vs. 86.87 mm (3.420 inches) (control photographs) (Exhibit A, Figure 10).

9. It is my understanding that this declaration is to be submitted as evidence in a judicial proceeding in the State of California and will be offered as the equivalent of sworn oral testimony.

I declare under the penalty of perjury that the foregoing is true and correct. Executed this 18 day of January, 2008, at Ottawa, Canada.

  
Gary R Robertson