

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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GLOBAL TEL\*LINK CORPORATION  
Petitioner

v.

SECURUS TECHNOLOGIES, INC.  
Patent Owner

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Patent No. 9,083,850 B1

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**DECLARATION OF DR. IAIN RICHARDSON  
IN SUPPORT OF PETITION FOR  
*INTER PARTES* REVIEW OF  
U.S. PATENT NO. 9,083,850**

I, Iain Richardson, PhD., declare as follows:

1. I have been retained on behalf of Global Tel\*Link Corporation (“GTL”) for the above-captioned *inter partes* review proceeding. I understand that this proceeding involves U.S. Patent No. 9,083,850 (“’850 patent”), titled “**Video Blurring In A Secure Environment.**”

2. I have reviewed and am familiar with the specification of the ‘850 patent issued on July 14, 2015. I will cite to the specification using the following format: (the ‘850 patent, 1:1–10). This example citation points to the ‘850 patent specification at column 1, lines 1–10.

3. I have also reviewed and am familiar with the following prior art:

- U.S. Patent No. 9,106,789 to Shipman, Jr. *et al.* (“Shipman”). I understand that Shipman has been provided as Exhibit 1004.
- U.S. Patent No. 7,911,513 to Garrison *et al.* (“Garrison”). I understand that Garrison has been provided as Exhibit 1005.
- U.S. Patent No. 6,734,900 to Mayhew (“Mayhew”). I understand that Mayhew has been provided as Exhibit 1006.
- “Remote Controlled DSP Based Image Capturing and Processing System Featuring Two-Axis Motion,” by Gotsopoulos *et al.*, (“Gotsopoulos”). I understand that Gotsopoulos has been provided as exhibit 1008.

- U.S. Patent Publication No. 2008/0201158 A1 to Johnson *et al.* (“Johnson”).

I understand that Johnson has been provided as Exhibit 1007.

4. I have also reviewed and am familiar with the other materials cited or referred to in this declaration.

5. I have relied on these materials to varying degrees. Citations to these materials that appear below are meant to be exemplary but not exhaustive.

6. I am familiar with the technology at issue as of the June 29, 2013 filing date of the ‘850 patent, which I also understand is the earliest possible priority date.

7. I have been asked to provide my technical review, analysis, insights and opinions regarding the above-noted references that form the basis for the grounds of rejection set forth in the Petition for *Inter Partes* Review of U.S. Patent No. 9,083,850.

#### **I. Qualifications.**

8. I am an expert in video and image compression, decompression and transmission. I am the author of four books and over 70 journal and conference papers on image and video coding and communications, including two widely cited books on the H.264 / MPEG-4 industry standards for video compression. I

have specific expertise in the area of video telephony and conferencing systems, including the use of filtering or blurring in such systems.

9. I received an M.Eng. in Electronic and Electrical Engineering from Heriot-Watt University in Edinburgh in 1990 and a Ph.D. in Video Compression from Robert Gordon University in 1999. I worked as a Digital Signal Processing (“DSP”) Hardware Designer with GEC Avionics Ltd. from 1990 to 1993. In 1993, I took up a post as a Lecturer, then Reader, and eventually a Full Professor in the field of image and video compression in the School of Engineering at The Robert Gordon University and in 2009 was honored as an Honorary Professor with the Robert Gordon University, a position I maintain to this day.

10. At Robert Gordon University, I founded and ran an image communication technology research laboratory. I carried out original research in the field of data, image, and video compression, initiated and managed research projects, and supervised research students.

11. A particular focus of my research at the Robert Gordon University has been the efficient communication of visual information via videoconference and videotelephone systems. I have written a number of scientific papers on this topic. My research team and I investigated visual communications for deaf people and developed videoconferencing technology that improved sign language

communication by selectively blurring the background in a video scene and providing the video to a remotely located viewer (Muir and Richardson, “Perception of Sign Language and its Application to Visual Communications for Deaf People”, *Journal of Deaf Studies and Deaf Education*, September 2005). With my colleague Ying Zhong, I investigated the effect of blurring or increasing the compression of background and foreground regions in video images and the effect on compressed video transmission (Zhong, Richardson *et al*, “Influence of Task and Scene Content on Subjective Video Quality”, *Lecture Notes in Computer Science*, 2004). I investigated the application of videoconferencing and remote video monitoring in healthcare facilities and restricted working environments such as offshore installations as part of a major EU research project (Richardson et al, “Telemedicine and Teleconferencing: the SAVIOUR project”, *IEE Computing and Control Journal*, January 1996).

12. In 1995, during my employment at the Robert Gordon University, I co-founded and became Technical Director, equivalent of Chief Technology Officer, at 4i2i Communications Limited. I held this position until 2000. In my role at 4i2i, I was responsible for and engaged in the design of software and hardware modules for compression and communication systems, including the design of

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