

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SONY CORPORATION
Petitioner

v.

RAYTHEON COMPANY,
Patent Owner

Case: IPR2016-00209

Patent 5,591,678

DECLARATION OF EUGENE A. FITZGERALD

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Appendix 1 – *Curriculum Vitae*

Appendix 2 – List of Documents Considered

I, Dr. Eugene A. Fitzgerald, hereby declare, affirm and state the following:

I. Introduction

1. The facts set forth below are known to me personally, and I have firsthand knowledge of them.

2. I make this Declaration in support of the Patent Owner’s response to the Petition for *inter partes* review (“IPR”) of U.S. Patent No. 5,591,678 (“the ’678 Patent”).

3. I have been retained by Steptoe & Johnson LLP on behalf of the Patent Owner, Raytheon Company (“Raytheon”).

4. I have been asked to provide my technical review, analysis, insights, and opinions on the materials I have reviewed in this case related to the ’678 Patent, including the references cited in Petitioner’s grounds of rejection set forth in Petition No. IPR2016-00309 for *Inter Partes* Review of the ’678 Patent (“Petition”), and the scientific and technical knowledge regarding the same subject matter at the time of the inventions disclosed in the ’678 Patent.

II. Qualifications and Compensation

5. I am over the age of eighteen and I am a citizen of the United States.

6. I have summarized in this section my educational background, career history, and other relevant qualifications. My curriculum vitae, including my qualifications, a list of the publications that I have authored during my technical career, and a list of the cases in which, during the previous four years, I have testified as an expert at trial or by deposition, is attached to this declaration as Appendix 1.

7. I received a B.S. in Materials Science and Engineering from the Massachusetts Institute of Technology in 1985, a M.S. in Materials Science and Engineering from Cornell University in 1987 and a Ph.D. in Materials Science and Engineering from Cornell University in 1989.

8. From 1988 to 1994, I worked as a research scientist at AT&T Bell Laboratories in Murray Hill, N.J., in the Materials Science and Engineering Department. While at AT&T Bell Laboratories, I conducted fundamental research in semiconductor materials and devices.

9. From 1994 to 2000, I was an Associate Professor at MIT. From 2000 to the present, I have been a Professor of Materials Science at MIT, in the Materials Science and Engineering Department. I am currently the Merton C. Flemings-Singapore-MIT-Alliance Professor of Materials Science and Engineering and currently the Lead Principal Investigator of MIT SMART LEES (Singapore-MIT Alliance for Research and Technology, MIT's Research Center in Singapore, Low

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