

EXHIBIT 10\$&

**TO PETITIONER GOOGLE INC.'S
PETITION FOR COVERED BUSINESS
METHOD REVIEW OF
U.S. PATENT NO. 8,336,772**

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

GOOGLE INC.
Petitioner

v.

SMARTFLASH LLC
Patent Owner

U.S. Patent No. 8,336,772

Covered Business Method Review Case No. Unassigned

DECLARATION OF DR. JUSTIN DOUGLAS TYGAR

I, Dr. Justin Douglas Tygar, declare as follows:

1. I have been retained as an expert witness on behalf of Google Inc. (“Google” or “petitioner”) in connection with the instant Covered Business Method (“CBM”) review petition.
2. I am being compensated for my time in connection with this CBM review at my standard consulting rate, which is \$500 per hour up to a maximum of \$5,000 per day. My compensation is not dependent on the substance of my opinions, my testimony, or the outcome of this CBM review.
3. I understand that the petition for CBM review involves U.S. Patent No. 8,336,772 (“the ’772 patent”), Ex. 1001.¹
4. I have reviewed and am familiar with the ’772 patent, including claims 1, 5, 9, 10, 21, and 22 (the “challenged claims”). I have reviewed and am familiar with six patents related to the ’772 patent: U.S. Patent Nos. 7,334,720, 7,942,317, 8,033,458, 8,061,598, 8,118,221, and 8,794,516. I have reviewed and am familiar with the file histories for the ’772 patent and the six related patents.
5. I am familiar with the general state of the technology at issue in the ’772 patent as of October 25, 1999, its purported priority date.

¹ All references to “Ex. ___” in this declaration refer to the Google Exhibits concurrently filed with Google’s CBM petition.

6. In preparing this declaration, I have considered each of the documents cited herein. I have also relied on my experience in the relevant art in connection with forming my opinions.

I. QUALIFICATIONS

7. Since 1998, I have been a Full Professor at the University of California, Berkeley. I hold a professor position in two departments at U.C. Berkeley: the Department of Electrical Engineering and Computer Sciences (Computer Sciences Division) and the School of Information. Before joining U.C. Berkeley, I was a tenured professor at Carnegie Mellon University in Computer Science, where I had a faculty appointment since 1986. I received my Ph.D. in Computer Science from Harvard University in 1986. I have extensive research, teaching, and industry experience in the areas of computer security and electronic commerce, with a special research interest in digital rights management as it relates to those areas.

8. I have helped build a number of security and electronic commerce systems. Together with my colleague at Carnegie Mellon, Marvin Sirbu, I developed Netbill, a patented electronic payment system that was licensed to CyberCash (now part of Verisign). For the U.S. Postal Service, I designed the two dimensional "Information Based Indicia" postage indicia that have now become a widely used standard. Together with my graduate students, I

designed the architecture and a foundational operating system used on secure coprocessors, Dyad. Together with my graduate students, I designed Micro-Tesla, a light-weight cryptographic architecture that ultimately became a standard of the Internet Engineering Task Force and is widely used in sensor webs.

9. I served as chair of the Defense Department's ISAT Study Group on Security with Privacy and was a founding board member of the Association for Computing Machinery's Special Interest Group on Electronic Commerce.
10. I have written three books, including *Secure Broadcast Communication in Wired and Wireless Networks* (with Adrian Perrig), which has become a standard reference. My fourth book, *Adversarial Machine Learning*, is scheduled to be published by Cambridge University Press in 2015.
11. I have been an active researcher in the fields of computer security and electronic commerce continuously since 1982.
12. My complete *curriculum vitae* is submitted as Google Exhibit 1003.
13. My findings explained in this declaration are based on my years of education, research, and industry experience in computer security and e-commerce technologies, including as applied to digital rights management.

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