EXHIBIT A

UNITED STATES DISTRICT COURT DISTRICT OF MASSACHUSETTS

Civil Action No. 1:19-cv-11272-RGS	
	Civil Action No. 1:19-cv-11278-RGS

CORRECTED DECLARATION OF DR. MICHAEL SHAMOS

I, Michael Ian Shamos, Ph.D., do hereby declare as follows under penalty of perjury under the laws of Massachusetts, Pennsylvania and the United States that the following is true and correct:

I. INTRODUCTION

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1. I have been retained by counsel for Plaintiff in this case to offer opinions as to the scope and meaning that would have been given to certain terms and phrases appearing in the claims of Cox et al. U.S. Patents 6,324,578 ("the '578 Patent") and 7,069,293 ("the '293 Patent") by one of ordinary skill in the art at the time of the inventions. The statements of fact made in this declaration are based on my own personal knowledge



and analysis.

- 2. In rendering my opinions, I reviewed intrinsic evidence, including the text of the Patents, their prosecution history, extrinsic evidence, Plaintiff's Disclosure of Claim Terms & Proposed Constructions and Defendants' Local Rule 16.6(E)(1) Disclosures. My opinions are based on my years of education, training, research, knowledge, and personal and professional experience in the relevant art. Attached as Exhibit B is my current curriculum vita.
- 3. I am being compensated at my usual consulting rate of \$600 per hour for my work related to this matter. My compensation is in no way dependent on the outcome of this dispute or the testimony or opinions that I may provide. I have no financial interest, beneficial or otherwise, in the Patent or any of the parties.
- 4. I reserve the right to supplement and/or amend my opinions in this declaration based on future positions taken by the parties, their experts, additional documents, testimony, or other information provided by the parties or their witnesses, any orders from the Court, or as otherwise necessary.

II. BACKGROUND AND EXPERIENCE

5. I hold the title of Distinguished Career Professor in the School of Computer Science at Carnegie Mellon University in Pittsburgh, Pennsylvania. I am a member of two departments in that School, the Institute for Software Research and the Language Technologies Institute. I was a founder and Co-Director of the Institute for eCommerce at Carnegie Mellon from 1998-2004 and from 2004-2018 I was Director of the eBusiness Technology graduate program in the Carnegie Mellon University School of



Computer Science. I am now Director of the M.S. in Artificial Intelligence and Innovation degree program at Carnegie Mellon.

- 6. I received an A.B. (1968) from Princeton University in Physics; an M.A. (1970) from Vassar College in Physics; an M.S. (1972) from American University in Technology of Management, a field that covers quantitative tools used in managing organizations, such as statistics, operations research and cost-benefit analysis; an M.S. (1973), and M.Phil. (1974) and a Ph.D. from Yale University in Computer Science; and a J.D. (1981) from Duquesne University.
- 7. I have taught graduate courses at Carnegie Mellon in Electronic Commerce, including eCommerce Technology, Electronic Payment Systems, Electronic Voting and eCommerce Law and Regulation, as well as Analysis of Algorithms. Since 2007 I have taught an annual course in Law of Computer Technology. I currently also teach Artificial Intelligence and Future Markets.
- 8. Since 2001 I have been a Visiting Professor at the University of Hong Kong, where I teach an annual course on Electronic Payment Systems.
- From 1979-1987 I was the founder and president of two computer software development companies in Pittsburgh, Pennsylvania, Unilogic, Ltd. and Lexeme Corporation.
- 10. I am an attorney admitted to practice in Pennsylvania and have been admitted to the Bar of the U.S. Patent and Trademark Office since 1981. I have not been asked to offer any opinions on patent law in this case.
 - 11. I am a named co-inventor on the following five issued patents relating to



electronic commerce: U.S. Patent Nos. 7,330,839, 7,421,278, 7,747,465, 8,195,197 and 8,280,773.

- 12. I have previously served as an expert in over 270 cases concerning computer technology. In particular, I have been involved in multiple cases involving computer technology and wireless devices. In particular, I have been involved in multiple cases involving electronic payment systems. A current copy of my curriculum vitae setting forth details of my background and relevant experience, including a full list of my publications and a listing of cases for which I have provided expert testimony is in my C.V. in Exhibit B.
 - 13. Materials I considered in preparing this declaration are listed in Exhibit A.

III. LEGAL PRINCIPLES

- 14. I have been informed by counsel for Plaintiff that the following principles of law are applicable to claim construction, and I have applied these principles in my analysis.
- 15. The claims of a patent define the limits of the patentees' exclusive rights. In order to determine the scope of the claimed invention, courts typically construe (or define) claim terms when the meanings are disputed by the parties. Claim terms should generally be given their ordinary and customary meaning as understood by one of ordinary skill in the art at the time of the invention after reading the patent and its prosecution history.
- 16. Claims must be construed, however, in light of, and consistent with, the patent's intrinsic evidence. Intrinsic evidence includes the claims themselves, the written



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