## IN THE UNITED STATES DISTRICT COURT FOR THE WESTERN DISTRICT OF PENNSYLVANIA

SIGHTSOUND TECHNOLOGIES, LLC,	
Plaintiff, v.	) Civil Action No. 2:11-cv-01292-DWA  Honorable Judge Donetta W. Ambrose
APPLE, INC.,	)
Defendant.	) ) _)

RESPONSIVE DECLARATION OF J.D. TYGAR, PH.D.

### INTRODUCTION AND BACKGROUND

- 1. My name is Justin Douglas Tygar. I am a tenured, full Professor at the University of California, Berkeley, with a joint appointment in the Department of Electrical Engineering and Computer Science (Computer Science Division) and the School of Information. Prior to joining UC Berkeley in 1998, I was a tenured faculty member in the Computer Science Department at Carnegie Mellon University.
- 2. I am an expert in software engineering, computer security, and cryptography. I have taught courses in software engineering and computer security, at the undergraduate, master's, and Ph.D. level at both UC Berkeley and Carnegie Mellon University.
- 3. I have also co-written three books that address networking technology and security for networking technology, and one of those books has been translated into Japanese. I have helped design the DETER networking testbed supported by the U.S. National Science Foundation and the U.S. Department of Homeland Security that is a widely used framework for testing networking. Further, I led the team that designed the SWOON overlay network used to test mobile networking in that environment.
- 4. Among my awards are the National Science Foundation Presidential Young Investigator Award and the Kyoto Fellowship.
- 5. I was the co-inventor of a major electronic commerce payment system called NetBill which has been patented, implemented, and licensed to a commercial company CyberCash. I am the UC Berkeley lead of the U.S. National Science Foundation Science and Technology Center TRUST, which studies issues associated with networking and security. The U.S. State Department chose my project at UC Berkeley to examine the security and networking issues, including load-balancing issues, for communications protocols and software to support



Internet freedom and allow users to bypass national firewalls in countries such as China, Iran, and Syria. I am also associated with the Intel Science and Technology Center SCRUB, which focuses on issues related to networking and security. I helped design the security standards for the US Postal Service's Information Based Indicia Program (cryptographic postal indicia).

- 6. Appendix A of my initial declaration in support of SightSound Technologies LLC's ("SightSound") Opening Claim Construction Brief contains a list of court cases for which I have provided testimony at trial or at deposition since January 1, 2007. Appendix B of that declaration also contains my curriculum vitae (including a full publication list for the last ten years).
- 7. Counsel for SightSound requested that I provide expert analysis pertinent to claim construction issues in the case *SightSound Technologies, LLC v. Apple, Inc.*, Civ. Action No. 2:11-cv-01292-DWA, in the United States District Court for the Western District of Pennsylvania. I am charging \$500/hour for work performed (limited to a maximum charge of \$5000/day). My compensation is in no way dependent on the outcome of the case.
- 8. In preparing to submit this Declaration, I have read the following materials: U.S. Patent No. 5,191,573 (the "573 Patent"), U.S. Patent No. 5,675,734 (the "734 Patent"), and U.S. Patent No. 5,966,440 (the "440 Patent") (collectively, the "Hair Patents"); the parties' Joint Disputed Claim Terms Chart (Aug. 8, 2012); the Declaration of Dr. John P.J. Kelly (which I refer to as the "Kelly Declaration" or "Kelly Decl."), dated September 7, 2012; each parties' opening brief; and other materials cited herein.

### RESPONSE TO DECLARATION OF DR. KELLY

## Telecommunications Lines

9. Dr. Kelly references the prosecution history of the Hair patents and opines that



"one of ordinary skill in the art would interpret that the applicant disclaimed from coverage anything less than the usage of telecommunications lines for every component in the connection from the first party to the second party." Kelly Decl. ¶ 20. I disagree with this conclusion, and disagree that the cited text supports this conclusion.

- transfer money to the first party. In contrast, the claims of the Hair patents require, in various terms, that the first party be at a first party location while the second party is at a second party location remote from the first party location. See '573 PH, 06/25/92 Amend. at 20. The emphasis was on the relative locations of the parties at the time money was transferred, not on the nature of the method of communication between them. This is consistent with Mr. Hair's argument that "Lightner... does not teach or suggest the use of telephone or telecommunication lines with respect to the transfer of money."
- 11. Accordingly, I stand by my opinion put forth in paragraphs 17 to 25 of my declaration of September 7, 2012. In 1988, one of reasonable skill in the art would have understood "telecommunications lines" to include telephone lines, fiber-optic cable, wireless networking, and several other mediums of electronic communication (such as cellular telephones and microwave transmissions). The terms would have covered transmissions using metal wires, non-metallic fiber-optic cables, and wireless transmissions using electromagnetic particles.

#### Line

12. Dr. Kelly again references the prosecution history of the Hair patents and opines that "one of ordinary skill in the art would understand the claim term 'line,' as used in the asserted patents, to mean a 'wire.'" Kelly Decl. ¶¶ 15, 27. I disagree with this conclusion, and disagree that the cited text supports this conclusion.



- "telecommunication link" indefinite and rejected in on this basis. In response, Mr. Hair amended the claim to use "telecommunication line" instead. Kelly Decl. ¶ 24 (citing '573 PH 02/24/92 Office Action at 6; '573 PH 06/25/92 Amend. at 6). The rejection was made "for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention." '573 PH 02/24/09 Office Action at 6. The Examiner cited a portion of the statute in making his rejection, explaining that the "written description" must provide sufficiently "exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same." Id. (citing 35 U.S.C. § 112) (emphasis added). The Examiner went on to state that "the 'telecommunications link' is not well connected in the system." Id. Thus, the Examiner did not, as Dr. Kelly states, reject the use of "an intangible 'link'" (Kelly Dec. ¶ 15), but only found that one of ordinary skill in the art, on reading the patent, would not understand what was meant by "telecommunication link."
- 14. My opinion is that one of ordinary skill in the art would understand that, by changing "link" to "line" in response to an indefiniteness rejection, no narrowing of scope was intended.
- distinguishing Lightner as prior art." Kelly Decl. ¶16. However, the applicant noted that "Lightner, U.S. Patent 3,718,906 is currently not a basis of rejection of the claim" and sought to clarify the differences between "new Claim 23" and Lightner. '573 PH 6/25/92 Amend. at 19. No reference was made in the applicant's argument regarding a distinction between "line" and "link." Thus, one of ordinary skill in the art would understand that the applicant's discussion of Lightner was unrelated to the changing of "link" to "line" in response to the indefiniteness



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