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9   IN THE UNITED STATES DISTRICT COURT

10   FOR THE CENTRAL DISTRICT OF CALIFORNIA

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BLACKBERRY LIMITED, a   )
12   Canadian corporation,   )
)
13   Plaintiff,   )   CASE NO. 2:18-cv-02693
14   )   GW(KSx)
)
15   v.   )
)   **DECLARATION OF PATRICK**
16   SNAP INC., a Delaware corporation,   )   **MCDANIEL, PH.D.**
)   **REGARDING CLAIM**
17   Defendant.   )   **CONSTRUCTION**
18   )
)
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I, Patrick McDaniel, Ph.D., declare as follows:

I.   Introduction

1.   My name is Patrick McDaniel, Ph.D.

2.   I have been retained by counsel for Plaintiff BlackBerry Limited ("BlackBerry") as an expert in this litigation to provide opinions concerning certain claim terms in U.S. Patent No. 8,326,327 ('327 Patent) and U.S. Patent No. 8,825,084 ('084 Patent) (together, the "Action Spots Patents").

3.   I am being compensated at my standard billing rate of $600 per hour for time spent on this matter.

4.   My compensation is in no way dependent on the outcome of this investigation.

II.   Background And Qualifications

5.   My qualifications for forming the opinions in this report are summarized here. I earned a Ph.D. in Computer Science and Engineering from University of Michigan, Ann Arbor in 2001. I earned a Bachelor of Science degree in Computer Science from Ohio University in 1989 and a Master of Science degree, also in Computer Science, from Ball State University in 1991.

6.   Since 2017, I have been the William L. Weiss Professor of Information and Communications Technology in the School of Electrical Engineering and Computer Science at the Pennsylvania State University in University Park, Pennsylvania. I am also the director of the Institute for Network and Security Research, director of the National Science Foundation Funded Center for Trustworthy Machine Learning, and founder and co-director of the Systems and Internet Infrastructure Security Laboratory, a research laboratory focused on the study of security in diverse network and computer environments. My research efforts primarily involve computer systems, mobile device systems and security,

Case No. 2:18-cv-02693 GW(KSx)

network, management, and authentication, systems security, and technical public policy.

7. Before my current position, I was an Assistant Professor (2004-2007), Associate Professor (2007-2011), Full Professor (2011-2015), and Distinguished Professor of Computer Science and Engineering at the Pennsylvania State University. Since 2004, I have taught several courses in the field of computer systems, systems programming, networks, and network and computer security at both the undergraduate and graduate level. I created and continue to maintain several of these courses for Penn State.

8. From 2003-2009, I was also an Adjunct Professor at the Stern School of Business at New York University in New York, NY. At the Stern School of Business, I taught courses in computer and network security and online privacy.

9. I am a Fellow of the Association for Computing Machinery (the leading professional association for computer science) for "contributions to computer and mobile systems security" and the Institute for Electrical and Electronics Engineering (the leading professional association for computer engineering) for "contributions to the security of mobile communications".

10. I was the Program Manager (PM) and lead scientist for the Cyber Security Collaborative Research Alliance (CRA) from 2012 to 2018. The CRA is led by Penn State University and includes faculty and researchers from the Army Research Laboratory, Carnegie Mellon University, Indiana University, the University of California-Davis, and the University of California-Riverside. This national scale initiative is a research project aimed at developing a new science of cyber-security for military networks, computers, and installations.

11. I have served as an advisor to several Ph.D. and master's degree candidates, several of whom have gone on to become professors at various institutions such as North Carolina State University, the University of Oregon, and

the Georgia Institute of Technology. I am currently an advisor to two Ph.D. candidates and a number of master's students.

12.   Before joining Pennsylvania State University as a professor, I was a software developer and project manager for companies in the networking industry including Applied Innovation, Inc. and Primary Access Corporation. I was also a senior researcher at AT&T Research-Labs. As part of my duties in these industrial positions, I designed and implemented online services and features such as those at issue in this case.

13.   I have published extensively in the field of network and security management, mobile networking and device operating systems, computer systems. authentication, systems security, applied cryptography and network security. In addition to writing several articles for industry journals and conferences, I have authored portions of numerous books related to computer systems, applied cryptography and network security. I have served on the editorial boards of several peer-reviewed journals including ACM Transactions on Internet Technology, for which I was the Editor-in-Chief. I was also an Associate Editor for ACM Transactions on Information and System Security and IEEE Transactions of Software Engineering, two highly-regarded journals in the field. A complete list of my publications in the last 10 years, as well as a list of editorial positions can be found in *curriculum vitae,* as attached as Exhibit A.

14.   In view of the foregoing, I am qualified to testify as one skilled in the art with respect to the technology at issue in this matter.

III.   Applicable Legal Standards

15.   I understand that claim construction is an issue of law for the Court to decide.

16.   I further understand that claim terms should be given their ordinary and customary meaning within the context of the patent in which the terms are used, i.e.,

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the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention in light of what the patent teaches.

17. I understand that to determine how a person of ordinary skill would understand a claim term, one should look to those sources available that demonstrate what a person of skill in the art would have understood disputed claim language to mean. Such sources include the words of the claims themselves, the remainder of the patent's specification, the prosecution history of the patent (all considered "intrinsic" evidence), and "extrinsic" evidence concerning relevant scientific principles, the meaning of technical terms, and the state of the art.

18. I understand that words or terms should be given their ordinary and accepted meaning unless it appears that the inventors were using them to mean something else. In making this determination, of paramount importance are the claims, the patent specification, and the prosecution history. Additionally, the specification and prosecution history must be consulted to confirm whether the patentee has acted as its own lexicographer (i.e., provided its own special meaning to any disputed terms), or intentionally disclaimed, disavowed, or surrendered any claim scope. I understand that the specification can effectively act as a dictionary when it expressly defines terms used in the claims or when it defines terms by implication.

19. A claim construction analysis must begin and remain centered on the claim language itself. Additionally, the context in which a term is used in the asserted claim can be highly instructive. Likewise, other claims of the patent in question, both asserted and unasserted, can inform the meaning of a claim term. For example, because claim terms are normally used consistently throughout the patent, the usage of a term in one claim can often illuminate the meaning of the same term in other claims. Differences among claims can also be a useful guide in understanding the meaning of particular claim terms.

Case No. 2:18-cv-02693 GW(KSx)

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