



of all substantial rights in the Patents-in-Suit, including the rights to grant sublicenses, to exclude others from using it, and to sue and obtain damages and other relief for past and future acts of patent infringement.

3. On information and belief, Bullitt Mobile, LLC is a company organized and existing under the laws of New York, with registered address of 52 Elm Street, Suite #4, Huntington, NY 11743. On information and belief, Bullitt Mobile, LLC, together with its UK parent Bullitt Mobile Limited, designs, manufactures, markets, and sells mobile phones in the United States under the Caterpillar brand (*see* Exhibit A).

#### **JURISDICTION AND VENUE**

4. This lawsuit is a civil action for patent infringement arising under the patent laws of the United States, 35 U.S.C. § 101 *et seq.* The Court has subject-matter jurisdiction pursuant to 28 U.S.C. §§ 1331, 1332, 1338(a), and 1367.

5. The Court has personal jurisdiction over Defendant for at least four reasons: (1) Defendant has committed acts of patent infringement and contributed to and induced acts of patent infringement by others in this District and elsewhere in Texas; (2) Defendant regularly does business or solicits business in this District and in Texas; (3) Defendant engages in other persistent courses of conduct and derives substantial revenue from products and/or services provided to individuals in this District and in Texas; and (4) Defendant has purposefully established substantial, systematic, and continuous contacts with the District and should reasonably expect to be haled into court here.

6. Specifically, Defendant has partnered with Caterpillar Inc., who operates a website that sells and offers for sale the Accused Products to consumers in this District

and Texas (*see* Exhibits A, B & C), sells and offers for sale the Accused Products to consumers in this District and in Texas via other online channels (*see, e.g.*, Exhibit D), and offers electronic and telephonic support services to customers in this District and Texas (*see* Exhibits E & F). Given these extensive contacts, the Court's exercise of jurisdiction over Defendant will not offend traditional notions of fair play and substantial justice.

7. Venue is proper in this judicial district under 28 U.S.C. §§ 1391(b)-(c) and 1400(b) because Defendant does business in the State of Texas, Defendant has committed acts of infringement in Texas and in the District, a substantial part of the events or omissions giving rise to Blue Spike's claims happened in the District, and Defendant is subject to personal jurisdiction in the District. *See Luci Bags LLC v. Yonique, LLC*, No. 4:16-CV-00377, 2017 WL 77943, at \*3 (E.D. Tex. Jan. 9, 2017) ("For venue purposes, a defendant entity is deemed to reside in any judicial district where it would be subject to the court's personal jurisdiction with respect to the civil action in question.") (citing 28 U.S.C. § 1391(c)(2)).

### **FACTUAL BACKGROUND**

8. Protection of intellectual property is a prime concern for creators and publishers of digitized copies of copyrightable works, such as musical recordings, movies, video games, and computer software. Blue Spike founder Scott Moskowitz pioneered—and continues to invent—technology that makes such protection possible.

9. Moskowitz is a senior member of the Institute of Electrical and Electronics Engineers (IEEE), a member of the Association for Computing Machinery, and the International Society for Optics and Photonics (SPIE). As a senior member of the IEEE,

Moskowitz has peer-reviewed numerous conference papers and has submitted his own publications.

10. Moskowitz is an inventor of more than 100 patents, including forensic watermarking, signal abstracts, data security, software watermarks, product license keys, deep packet inspection, license code for authorized software and bandwidth securitization.

11. The National Security Agency (NSA) even took interest in his work after he filed one of his early patent applications. The NSA made the application classified under a “secrecy order” while it investigated his pioneering innovations and their impact on national security.

12. As an industry trailblazer, Moskowitz has been a public figure and an active author on technologies related to protecting and identifying software and multimedia content. A 1995 *New York Times* article—titled “TECHNOLOGY: DIGITAL COMMERCE; 2 plans for watermarks, which can bind proof of authorship to electronic works”—recognized Moskowitz’s company as one of two leading software start-ups in this newly created field. *Forbes* also interviewed Moskowitz as an expert for “Cops Versus Robbers in Cyberspace,” a September 9, 1996 article about the emergence of digital watermarking and rights-management technology. He has also testified before the Library of Congress regarding the Digital Millennium Copyright Act.

13. Moskowitz has spoken to the RSA Data Security Conference, the International Financial Cryptography Association, Digital Distribution of the Music Industry, and many other organizations about the business opportunities that digital watermarking creates. Moskowitz also authored *So This Is Convergence?*, the first book of its kind

about secure digital-content management. This book has been downloaded over a million times online and has sold thousands of copies in Japan, where Shogakukan published it under the name *Denshi Skashi*, literally “electronic watermark.” Moskowitz was asked to author the introduction to *Multimedia Security Technologies for Digital Rights Management*, a 2006 book explaining digital-rights management. Moskowitz authored a paper for the 2002 International Symposium on Information Technology, titled “What is Acceptable Quality in the Application of Digital Watermarking: Trade-offs of Security, Robustness and Quality.” He also wrote an invited 2003 article titled “Bandwidth as Currency” for the *IEEE Journal*, among other publications.

14. Moskowitz and Blue Spike continue to invent technologies that protect intellectual property from unintended use or unauthorized copying.

#### **THE ACCUSED TECHNOLOGY**

15. Defendant makes, uses, offers for sale and/or imports into the U.S. products, systems, and/or services that infringe the Patents-in-Suit, including, but not limited to, its CAT S30, CAT S40, CAT S50, CAT S60, and CAT S60 GSM products (collectively, the “Accused Products”).

16. Address Space Layout Randomization (“ASLR”) is a security technique that protects software by shuffling it in computer memory. Prior to implementing ASLR, modern-day operating systems often loaded software into predictable memory locations. That predictability allowed attackers to pinpoint specific portions of software and manipulate them in unintended ways. In response to this grave threat, many operating systems now utilize ASLR to reduce predictability by shuffling software to random memory locations.

17. The Android operating system utilizes ASLR technology to protect itself and other software from being compromised. Android began implementing ASLR technology as early as version 2, and advertised more robust implementations by versions 4 and 4.1. On information and belief, the Accused Products use various versions of the Android Operating System, beginning with version 4.0, and therefore infringe the ASLR Patents.

### **THE ACCUSED PRODUCTS**

18. Defendant makes, uses, offers for sale and/or imports into the U.S. products, systems, and/or services that infringe the Patents-in-Suit, including, but not limited to, its CAT S30, CAT S40, CAT S50, CAT S60, and CAT S60 GSM products (collectively, the “Accused Products”). On information and belief, the Accused Products use various versions of the Android Operating System, beginning with version 4.0, that implement the accused ASLR technology.

19. Defendant has not sought or obtained a license for any of Blue Spike’s patented technologies.

20. Yet Defendant’s Accused Products are using methods, devices, and systems taught by Blue Spike’s Patents-in-Suit.

21. Although Blue Spike is not obligated to identify specific claims or claim elements in its complaint, it does so below for Defendant’s benefit. *See Rmail Ltd. v. Right Signature, LLC*, 2:11-CV-300-JRG, 2012 WL 2595305, at \*2 (E.D. Tex. July 5, 2012) (“Plaintiffs are not required to identify specific claims or claim elements at this stage of the litigation.”).

**COUNT 1:**  
**INFRINGEMENT OF U.S. PATENT NO. 5,745,569**

22. Blue Spike incorporates by reference the allegations in the paragraphs above.

23. The '569 Patent is valid, is enforceable, and was duly and legally issued by the United States Patent and Trademark Office.

24. Without a license or permission from Blue Spike, Defendant has infringed and continues to infringe on one or more claims of the '569 Patent—directly, contributorily, or by inducement—by importing, making, using, offering for sale, or selling products and devices that embody the patented invention, including, without limitation, one or more of the Accused Products, in violation of 35 U.S.C. § 271.

25. Defendant has been and now is directly infringing by, among other things, practicing all of the steps of the '569 Patent and/or directing, controlling, and obtaining benefits from its partners, distributors and retailers practicing all of the steps of the '569 Patent. Specifically, Defendant has partnered with Caterpillar Inc., who operates a website that sells and offers for sale the Accused Products to consumers in this District and Texas (*see* Exhibits A, B & C), sells and offers for sale the Accused Products to consumers in this District and in Texas via other online channels (*see, e.g.*, Exhibit D), and has attended trade shows in the United States where it has demonstrated the Accused Products (*see, e.g.*, Exhibit G).

26. The Accused Products infringe claims of the '569 Patent, such as Claim 16 which teaches

A method for copy protecting a software application executed by a computer system, the software application including a plurality of executable code resources loaded in a memory of the computer system, said method comprising the steps of:

determining an address within the memory of the computer system associated with each of the plurality of executable code resources; and intermittently relocating each of the plurality of executable code resources to a different address within the memory of the computer during execution of the software application.

27. Defendant's Accused Products utilize the Android operating system, which employs Address Space Layout Randomization, a security technique that protects software by shuffling it in computer memory (*method for copy protecting a software application ... comprising the steps of: determining an address within the memory of the computer system associated with each of the plurality of executable code resources; and intermittently relocating each of the plurality of executable code resources to a different address within the memory of the computer*). See Exhibit H ("Android 4.0 now provides address space layout randomization ... For the uninitiated, ASLR randomizes where various areas of memory (eg. stack, heap, libs, etc) are mapped in the address space of a process."); Exhibit I ("Each instance of an executable will be given a randomized address space layout at execution time.").

28. Defendant has been and now is indirectly infringing by way of inducing infringement by others and/or contributing to the infringement by others of the '569 Patent in the State of Texas, in this judicial district, and elsewhere in the United States, by, among other things, making, using, importing, offering for sale, and/or selling, without license or authority, products for use in systems that fall within the scope of one or more claims of the '569 Patent. Such products include, without limitation, one or more of the Accused Products. Such products have no substantial non-infringing uses and are for use in systems that infringe the '569 Patent. By making, using, importing offering for



sale, and/or selling such products, Defendant injured Blue Spike and is thus liable to Blue Spike for infringement of the '569 Patent under 35 U.S.C. § 271. It is not necessary for Plaintiff to indicate specific customers directly infringing the Patents-in-Suit through the use of Defendant's Accused Products. *See In re Bill of Lading Transmission and Processing System Pat. Litig.*, 681 F.3d 1323, 1336 (Fed. Cir. 2012); *see also Atwater Partners of Tex. LLC v. AT & T, Inc.*, No. 2:10-cv-175, 2011 WL 1004880, at \*3 (E.D. Tex. Mar. 18, 2011). Even so, Defendant induces and contributes to the infringement of its customers, who use the infringing functionality, and its partners and resellers, who offer for sale and sell the Accused Products (*see, e.g.*, Exhibits A, B, C & D). Those whom Defendant induces to infringe and/or to whose infringement Defendant contributes are the end users and direct infringers of the Accused Products.

29. Defendant had knowledge of the '569 Patent at least as early as the service of this complaint. Defendant has known that the Accused Products infringe the Patents-in-Suit, are especially made and adapted to infringe the Patents-in-Suit, cannot be used without infringing the technology claimed by the Patents-in-Suit, and have no alternative non-infringing uses. Nevertheless, Defendant has continued to induce its customers and partners to infringe. Thus, Defendant is liable for infringement of one or more claims of the '569 Patent by actively inducing infringement and/or is liable as contributory infringer of one or more claims of the '569 Patent under 35 U.S.C. § 271. *See Sovereign Software LLC v. Oracle Corp.*, Case 6:12-cv-145, Dkt. 54, at \*7 (E.D. Tex. Mar. 21, 2014); *Tierra Intelectual Borinquen v. ASUS*, 2014 WL 1233040, at \*2 (E.D. Tex. Mar. 24, 2014) (“[P]re-suit knowledge is not required to successfully plead contributory infringement.”); *Uniloc USA, Inc. v. Avaya Inc.*, Case 6:15-cv-1158, Dkt. No 48, at \*8

(E.D. Tex. May 13, 2016) (“[A] pre-suit knowledge requirement for induced infringement would lead to absurd results.”).

30. Defendant’s acts of infringement of the ’569 Patent have caused damage to Blue Spike, and Blue Spike is entitled to recover from Defendant the damages sustained as a result of Defendant’s wrongful acts in an amount subject to proof at trial pursuant to 35 U.S.C. § 271. Defendant’s infringement of Blue Spike’s exclusive rights under the ’569 Patent will continue to damage Blue Spike, causing it irreparable harm, for which there is no adequate remedy at law, warranting an injunction from the Court.

31. On information and belief, the infringement of the Patents-in-Suit by Defendant has been willful and continues to be willful. Defendant knew that its incorporation of the accused technology in its Accused Products infringed the patents-in-suit. Defendant had knowledge of the Patents-in-Suit, including but not limited to at least one or more of the following:

a. The ’569 patent has been forward-cited as prior art in connection with the examination of at least 300 subsequently-issued U.S. patents, including Microsoft in its patent titled “License-based cryptographic technique, particularly suited for use in a digital rights management system, for controlling access and use of bore resistant software objects in a client computer,” Digimarc in its patent titled “Anti-piracy system for wireless telephony,” AT&T in multiple patents including one of its U.S. Patent titled “Protected IP telephony calls using encryption,” NEC in its U.S. Patent titled “Method and system for protecting digital data from unauthorized copying,” Matsushita Electric Industrial in its U.S. Patent titled “Active data hiding for secure electronic media distribution,” and multiple other well-known companies and government agencies,

including The U.S. Army, Intertrust Technologies, Texas Instruments, Dell Products, Intel, ShieldIP, Borland Software Company, Avaya Inc., ShoreTel Inc., and Syndata Technologies; and

b. in the course of its due diligence and freedom to operate analyses.

32. On information and belief, Defendant has at least had constructive notice of the '569 Patent by operation of law.

**COUNT 2:**  
**INFRINGEMENT OF U.S. PATENT NO. 8,930,719**

33. Blue Spike incorporates by reference the allegations in the paragraphs above.

34. The '719 Patent is valid, is enforceable, and was duly and legally issued by the United States Patent and Trademark Office.

35. Without a license or permission from Blue Spike, Defendant has infringed and continues to infringe on one or more claims of the '719 Patent—directly, contributorily, or by inducement—by importing, making, using, offering for sale, or selling products and devices that embody the patented invention, including, without limitation, one or more of the Accused Products, in violation of 35 U.S.C. § 271.

36. Defendant has been and now is directly infringing by, among other things, practicing all of the steps of the '719 Patent and/or directing, controlling, and obtaining benefits from its partners, distributors and retailers practicing all of the steps of the '719 Patent. Specifically, Defendant has partnered with Caterpillar Inc., who operates a website that sells and offers for sale the Accused Products to consumers in this District and Texas (*see* Exhibits A, B & C), sells and offers for sale the Accused Products to consumers in this District and in Texas via other online channels (*see, e.g.*, Exhibit D),

and has attended trade shows in the United States where it has demonstrated the Accused Products (*see, e.g.*, Exhibit G).

37. The Accused Products infringe claims of the '719 Patent, such as Claim 1 which teaches

A computing device for running application software, comprising:  
an operating system;  
wherein said memory stores an application software;  
wherein said application software comprises  
(1) a memory scheduler code resource and (2) other code resources;  
wherein said application software is designed to call said memory scheduler code resource; wherein said memory scheduler code resource, when called, functions to shuffle said other code resources in said memory; and  
wherein said memory scheduler code resource is designed to modify a stack frame in said memory.

38. The Accused Products utilize the Android operating system, which employs Address Space Layout Randomization, a security technique that protects software by shuffling various code resources in computer memory (*application software [that] comprises: (1) a memory scheduler code resource and (2) other code resources; wherein said application software is designed to call said memory scheduler code resource; wherein said memory scheduler code resource, when called, functions to shuffle said other code resources in said memory; and wherein said memory scheduler code resource is designed to modify a stack frame in said memory*). See Exhibit J (“Android is a Linux based OS with 2.6.x kernel ... All the basic OS operations like I/O, memory management, and so on, are handled by the native stripped-down Linux kernel.”); Exhibit H (“Android 4.0 now provides address space layout randomization ... For the uninitiated, ASLR randomizes where various areas of memory (eg. stack, heap, libs, etc) are mapped

in the address space of a process.”); Exhibit I (“Each instance of an executable will be given a randomized address space layout at execution time.”); Exhibit K (“ASLR randomizes the base points of the stack, heap, shared libraries, and base executables”).

39. Defendant has been and now is indirectly infringing by way of inducing infringement by others and/or contributing to the infringement by others of the ’719 Patent in the State of Texas, in this judicial district, and elsewhere in the United States, by, among other things, making, using, importing, offering for sale, and/or selling, without license or authority, products for use in systems that fall within the scope of one or more claims of the ’719 Patent. Such products include, without limitation, one or more of the Accused Products. Such products have no substantial non-infringing uses and are for use in systems that infringe the ’719 Patent. By making, using, importing offering for sale, and/or selling such products, Defendant injured Blue Spike and is thus liable to Blue Spike for infringement of the ’719 Patent under 35 U.S.C. § 271. It is not necessary for Plaintiff to indicate specific customers directly infringing the Patents-in-Suit through the use of Defendant’s Accused Products. *See In re Bill of Lading Transmission and Processing System Pat. Litig.*, 681 F.3d 1323, 1336 (Fed. Cir. 2012); *see also Atwater Partners of Tex. LLC v. AT & T, Inc.*, No. 2:10-cv-175, 2011 WL 1004880, at \*3 (E.D. Tex. Mar. 18, 2011). Even so, Defendant induces and contributes to the infringement of its customers, who use the infringing functionality, and its partners and resellers, who offer for sale and sell the Accused Products (*see, e.g.*, Exhibits A, B, C & D). Those whom Defendant induces to infringe and/or to whose infringement Defendant contributes are the end users and direct infringers of the Accused Products.

40. Defendant had knowledge of the '719 Patent at least as early as the service of this complaint. Defendant has known that the Accused Products infringe the Patents-in-Suit, are especially made and adapted to infringe the Patents-in-Suit, cannot be used without infringing the technology claimed by the Patents-in-Suit, and have no alternative non-infringing uses. Nevertheless, Defendant has continued to induce its customers and partners to infringe. Thus, Defendant is liable for infringement of one or more claims of the '719 Patent by actively inducing infringement and/or is liable as contributory infringer of one or more claims of the '719 Patent under 35 U.S.C. § 271. *See Sovereign Software LLC v. Oracle Corp.*, Case 6:12-cv-145, Dkt. 54, at \*7 (E.D. Tex. Mar. 21, 2014); *Tierra Intelectual Borinquen v. ASUS*, 2014 WL 1233040, at \*2 (E.D. Tex. Mar. 24, 2014) (“[P]re-suit knowledge is not required to successfully plead contributory infringement.”); *Uniloc USA, Inc. v. Avaya Inc.*, Case 6:15-cv-1158, Dkt. No 48, at \*8 (E.D. Tex. May 13, 2016) (“[A] pre-suit knowledge requirement for induced infringement would lead to absurd results.”).

41. Defendant’s acts of infringement of the '719 Patent have caused damage to Blue Spike, and Blue Spike is entitled to recover from Defendant the damages sustained as a result of Defendant’s wrongful acts in an amount subject to proof at trial pursuant to 35 U.S.C. § 271. Defendant’s infringement of Blue Spike’s exclusive rights under the '719 Patent will continue to damage Blue Spike, causing it irreparable harm, for which there is no adequate remedy at law, warranting an injunction from the Court.

42. On information and belief, the infringement of the '719 Patent by Defendant has been willful and continues to be willful. Defendant knew its incorporation of the accused technology in its Accused Products infringed the patents-in-suit. *See In re Seagate Tech.*,

*LLC*, 497 F.3d 1360, 1371 (Fed. Cir. 2007) (en banc). Defendant had knowledge of the '719 Patent, including but not limited to at least one or more of the following:

a. The filing of Plaintiff's prior lawsuits asserting the '719 Patent against five major smartphone manufacturers—Xiaomi, Huawei, Infsonics, DDM Brands, and ZTE (consolidated as *Blue Spike, LLC v. Beijing Xiaomi Technology Co. Ltd. et al.* (E.D. Tex.) Case No. 2:15-CV-01785)—which has been widely publicized and reported upon—*see, e.g.*, “China’s Xiaomi slapped with patent-infringement suit by Blue Spike in US over upcoming Mi 5, Mi 5 Plus smartphones” *South China Morning Post* (Dec. 9, 2015), available at <http://www.scmp.com/tech/enterprises/article/1889024/chinas-xiaomi-slapped-patent-infringement-suit-blue-spike-us-over> and attached as Exhibit L; and

b. In the course of its due diligence and freedom to operate analyses.

43. On information and belief, Defendant has at least had constructive notice of the '719 Patent by operation of law.

### **REQUEST FOR RELIEF**

Blue Spike incorporates each of the allegations in the paragraphs above and respectfully asks the Court to:

(a) enter a judgment that Defendant has directly infringed, contributorily infringed, and/or induced infringement of one or more claims of each of the Patents-in-Suit;

(b) enter a judgment awarding Blue Spike all damages adequate to compensate it for Defendant's infringement of, direct or contributory, or inducement to infringe, the Patents-in-Suit, including all pre-judgment and post-judgment interest at the maximum rate permitted by law;

- (c) enter a judgment awarding treble damages pursuant to 35 U.S.C. § 284 for Defendant's willful infringement of one or more of the Patents-in-Suit;
- (d) issue a preliminary injunction and thereafter a permanent injunction enjoining and restraining Defendant, its directors, officers, agents, servants, employees, and those acting in privity or in concert with them, and their subsidiaries, divisions, successors, and assigns, from further acts of infringement, contributory infringement, or inducement of infringement of the Patents-in-Suit;
- (e) enter a judgment requiring Defendant to pay the costs of this action, including all disbursements, and attorneys' fees as provided by 35 U.S.C. § 285, together with prejudgment interest; and
- (f) award Blue Spike all other relief that the Court may deem just and proper.

**DEMAND FOR JURY TRIAL**

Blue Spike demands a jury trial on all issues that may be determined by a jury.

Respectfully submitted,

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