

FILED

UNITED STATES DISTRICT COURT  
EASTERN DISTRICT OF VIRGINIA  
ALEXANDRIA DIVISION

2013 AUG 16 P 4: 15

CLERK US DISTRICT COURT  
ALEXANDRIA, VIRGINIA

CELEBRITE MOBILE SYNCHRONIZATION, LTD.,  
CELEBRITE USA, INC.

Case No.: 13-Cv-<sup>CY</sup>1014 TSE/TRJ

*Plaintiffs,*

**COMPLAINT**

**-against-**

**ECF Case**

MICRO SYSTEMATION AB,  
MSAB, INC.,

*Defendants.*

Plaintiffs, Celebrite Mobile Synchronization Ltd. and Celebrite USA, Inc., by and through their undersigned counsel, by way of Complaint against Defendants, Micro Systemation AB and MSAB, Inc., respectfully, allege and submit as follows, pursuant to Rule 3 of the Federal Rules of Civil Procedure regarding Plaintiffs' state and federal claims based upon Defendants' willful and unlawful copying, theft and use of Plaintiffs' copyrighted software and trade secrets:

**THE PARTIES**

1. Celebrite Mobile Synchronization Ltd. ("**Celebrite**") is a company formed under the laws of Israel, with its principal place of business at 94 Derech Em Hamoshavot St., Petah Tikva 49130, Israel.

2. Celebrite USA, Inc. ("**Celebrite USA**") is a Delaware corporation, with its principal place of business at 266 Harristown Rd., Suite 105, Glen Rock, New Jersey 07452.

3. Micro Systemation AB ("**MS AB**") is a company formed under the laws of Sweden, with its principal place of business at Hornsbruksgatan 28, Stockholm, 117 34, Sweden.

MS AB is a public company traded on the main market of NASDAQ OMX Stockholm under the symbol MSAB-B.

4. MSAB, Inc. ("**MSAB, Inc.**") is a Delaware corporation registered to do business in Virginia, with its principal place of business at 5300 Shawnee Road, Suite 100, Alexandria, Virginia 22312.

5. MSAB, Inc. is a wholly owned subsidiary of MS AB.

### **JURISDICTION AND VENUE**

#### **A. Subject Matter Jurisdiction**

6. The Court has original subject matter jurisdiction pursuant to 28 U.S.C. §§ 1331, 1338 over Counts I, II, III, IV and V for copyright infringement and contributory copyright infringement in violation of the U.S. Copyright Act (the "**Copyright Claims**"), and over Counts VII and VIII for trademark infringement and unfair competition in violation of the Lanham Act (the "**Lanham Act Claims**").

7. The Court has supplemental jurisdiction pursuant to 28 U.S.C. § 1367(a) over Counts VI for Misappropriation of Trade Secrets pursuant to the Virginia Uniform Trade Secrets Act ("**VUTSA**"), Va. Code § 59.1-336, and Count IX for breach of contract, insofar as the VUTSA and breach of contract claims are so intertwined with Plaintiffs' Copyright Claims and are so related, that they are part of the same case and controversy under Article III of the U.S. Constitution, and derive from a common nucleus of operative facts.

#### **B. Personal Jurisdiction Over Defendants**

##### **1. Personal Jurisdiction Over MSAB, Inc.**

8. The Court has general personal jurisdiction over MSAB, Inc. insofar as MSAB, Inc. has registered to do business as a foreign company in Virginia pursuant to the Virginia Stock

Corporation Act § 13.1-759 by obtaining a certificate of authority from the Virginia State Corporation Commission on or about December 11, 2008. MSAB, Inc. has thereby consented to general jurisdiction in Virginia and has acknowledged that it is doing business in Virginia and has permanent, continuous, and regular business activities in Virginia.

9. MSAB, Inc. has appointed National Registered Agents, Inc., of Glen Allen, Virginia as its registered agent to accept service of process pursuant to the Virginia Stock Corporation Act § 13.1-766.

**2. Personal Jurisdiction Over MS AB**

10. Personal jurisdiction by the Court over MS AB in Virginia is supported on multiple grounds, including general personal jurisdiction and specific jurisdiction based upon the following:

a. General Personal Jurisdiction For Continuous Substantial Contacts in Virginia

11. The Court has general personal jurisdiction over MS AB in Virginia due to MS AB's permanent, long-term, extensive, continuous and systematic general business contacts and regular activities in Virginia dating back as early as 2008, such that maintenance of this action in the forum state would not offend traditional notions of fair play and substantial justice.

12. MS AB engages in regular, ongoing, continuous, and substantial commerce in the Commonwealth of Virginia through its physical presence and its on-line activities that specifically target customers and prospective customers in Virginia, including with the U.S. Department of Homeland Security's office in Fairfax, Virginia.

**i. MS AB and MSAB, Inc. Have the Same CEO**

13. According to MS AB's 2012 Certified Annual Report, dated as of April 11, 2013, approved by MS AB's board of directors, which contained a "Corporate Governance Report," certified by the company auditing firm, Deloitte AB (*see* [http://files.shareholder.com/downloads/AMDA-K7OAV/2427507972x0x653581/E5E9CB52-FCF6-418A-A3DF-348DA5A60D41/MSAB\\_rsredovisning\\_2012.pdf](http://files.shareholder.com/downloads/AMDA-K7OAV/2427507972x0x653581/E5E9CB52-FCF6-418A-A3DF-348DA5A60D41/MSAB_rsredovisning_2012.pdf)), a partial certified translation from Swedish to English of which is annexed hereto as **Exhibit 1** (the "**MS AB 2012 Annual Report**"), Joel Bollo, MS AB's Chief Executive Officer from Sweden, currently serves as the CEO for both MS AB and MSAB, Inc., and has served in such dual roles since MSAB, Inc.'s formation in 2008. See page 47 of MS AB 2012 Annual Report.

14. In fact, according to records located on Westlaw's "People Search," database, Joel Bollo resided for a period of time on Manors Court, in Great Falls, Virginia, while he was CEO of MS AB and MS AB, Inc., handling his executive duties for both companies from Virginia.

15. Upon information and belief, one of MS AB's largest customers in the world is the U.S. Department of Homeland Security ("**DHS**") operating out of DHS's Fairfax, Virginia offices, and as such MS AB derives substantial revenue from activities in Virginia.

**ii MS AB Employees Are Involved in Extensive, Ongoing Sales, Marketing, Management, Logistics and Technical Activities in Virginia**

16. According to the MS AB 2012 Annual Report, a mere eight (8) of MS AB's 76 employees are based in the United States.

17. According to a search on LinkedIn (a copy of which is annexed hereto as **Exhibit 2**), just three (3) employees are based in Virginia, three (3) employees are based in California,

one (1) employee is based in Mississippi; and one (1) member of MS AB's board of directors is based in California.

18. MS AB's entire core business operations, comprised of approximately 62 personnel, including management, administration, research and development – **boasting a team of thirty five (35) members** -- sales, logistics, manufacturing, production, and marketing are based in Sweden.

19. Upon information and belief, MS AB directly ships substantial products, including compact disks containing MS AB's software, cables and training manuals and information, from MS AB in Sweden to MSAB, Inc. in Virginia for further supply, distribution, and resale in Virginia, as well as directly to customers in Virginia and the United States.

20. A recent posting on MS AB's LinkedIn page shows an image of an assembly line with a full line of boxes to be filled with MS AB products and software for delivery around the world and likely to the United States with a caption stating: "[a]nother shipment of XRY kits being prepared by the MSAB Production Department." See Image in **Exhibit 3**.

21. As disclosed in the MS AB 2012 Annual Report, the largest part of MS AB's total global sales are derived from the United States. See MS AB 2012 Annual Report at page 4.

22. According to the MS AB 2012 Annual Report, all marketing and promotional activities are centralized and executed by MS AB in Sweden, including MS AB's activities on "the Internet, and social media such as Facebook, Twitter, LinkedIn, [www.msab.com](http://www.msab.com), and Google Adwords," pursuant to which MS AB actively targets customers and potential customers in the United States. See MS AB 2012 Annual Report at 10.

23. Upon information and belief, MS AB engages in planning and participation for trade shows, sales pitches, and operational activities in Virginia, in coordination with MSAB,

Inc., by, among other things, communications by email through email servers in Virginia and Sweden and transfer of documents between network servers in Sweden and Virginia, and supplying marketing and promotional collateral materials and support personnel from Sweden to Virginia; holding meetings in Virginia; lodging in Virginia; and working in Virginia at MSAB, Inc.'s offices further thereto.

24. MS AB's Swedish officers and employees regularly attend trade conferences in the U.S. and register for such conferences using the Virginia address: 5300 Shawnee Road, Suite 100, Alexandria, Virginia 22312 as their corporate address, thus invoking the benefits and protections of the laws, rules, and customs in Virginia.

25. In a recent trade show in Myrtle Beach, South Carolina, entitled "Mobile Forensics World," that was sponsored by Cellebrite, on June 1-4, 2013, all of the MS AB registrees used the Shawnee Road address in Virginia as business address when they purchased their admission to the event. As the event sponsor, Cellebrite received the registration information of all attendees.

26. Upon information and belief, MS AB has significant business in Virginia, including sales to the U.S. DHS, which is also a customer of Plaintiffs. According to the U.S. federal government contract portal at [www.fpds.gov](http://www.fpds.gov), a search of MS AB results in an award of at least 58 contracts in Virginia for the sale of its XRY products; and a search of MSAB, Inc. results in 51 contracts in Virginia for the sale of XRY products.

27. Upon information and belief, MS AB supports sales efforts and provides marketing support for U.S. sales in Virginia, first line technical support, and warranty support for products between Virginia and Sweden.

28. Upon information and belief, in light of the very small size of MSAB, Inc.'s personnel, and the significant number of clients MS AB boasts in the United States, as well as the strategic significance of the U.S. market to MS AB, MS AB employees regularly travel to and communicate with customers in Virginia for sales, marketing, and support objectives, thus, deriving substantial revenue, and engaging in substantial commercial activities in Virginia.

**iii. MS AB's Has Maintained Legal Counsel in Virginia Since 2011**

29. As noted in an application for trademark protection for the mark, "XRY," the name of MS AB's principal product, MS AB maintains a U.S. law firm representative based in Virginia as its authorized counsel for dealing with the U.S. Patent & Trademark Office. "XRY" is MS AB's software product that contains Cellebrite's misappropriated trade secrets, copyrights, and other intellectual property.

30. Such Virginia legal counsel, is Keith R. Malley, with an office address at 2111 Wilson Blvd., Arlington, Virginia. Mr. Malley has also acted as MS AB's legal representative to communicate with an adverse party in a lawsuit against MS AB in California that was unrelated to trademark issues. *See Future Dial v. Micro Systemation AB*, Dkt. No: 2012-cv-06479 (N.D. Cal. 2012).

31. Upon information and belief, MS AB employees regularly and continuously travel to Virginia to work out of MSAB, Inc.'s offices.

**iv. MS AB Has a Persistent and Significant Internet Presence in Virginia, Has Consented to Personal Jurisdiction in Virginia in its Web Domain Registration Agreement, Conducts E-Commerce in Virginia, Recruits Employees in Virginia, and Communicates with Customers in Virginia**

*1. MS AB Registered its Domain www.msab.com from Networks Solutions in Virginia and Has Consented to Personal Jurisdiction in this Court in Virginia in Connection Therewith*

32. As demonstrated by a “Whois” search on the Internet, MS AB registered the domain www.msab.com on or about October 6, 1997 from Networks Solutions, LLC, a foreign corporation registered to do business in Virginia, with its principal place of business located at 13861 Sunrise Valley Drive, Herndon, Virginia 20171 (“**Networks Solutions**”). The registration for www.msab.com expires on October 5, 2022.

33. The “Registrant” of www.msab.com is:

Micro Systemation AB  
rasundavagen 1  
solna, stockholm 16903  
SE  
+4687390270 fax: +4687300170

34. www.msab.com is the address of the web site of MS AB, which is accessible throughout the United States, including in the Commonwealth of Virginia.

35. Upon information and belief, @msab.com is the email domain suffix for all MS AB and MSAB, Inc. employees.

36. Pursuant to the general provisions of the Network Solutions Service Agreement (the “**Network Services T’s and C’s**”), which MS AB is a party to “the performance of [Network Solution’s] services will occur at [their] offices *in Herndon, Virginia*, the location of [its] principal place of business.” See [www.networksolutions.com/legal/static-service-agreement.jsp#general](http://www.networksolutions.com/legal/static-service-agreement.jsp#general).



37. The Network Services T's and C's also contain a consent to a personal jurisdiction in Virginia by MS AB – which is referred to as “You” per the T's and C's -- and a consent to Virginia governing law:

**21. GOVERNING LAW**

a. You and Network Solutions agree that this Agreement and any disputes hereunder shall be governed in all respects by and construed in accordance with **the laws of the Commonwealth of Virginia, United States of America**, excluding its conflicts of laws rules. You and we each agree to submit to exclusive subject matter jurisdiction, personal jurisdiction and venue of *the United States District Court for the Eastern District of Virginia, Alexandria Division* for any disputes between you and Network Solutions under, arising out of, or related in any way to this Agreement (whether or not such disputes also involve other parties in addition to you and Network Solutions).

(emphasis added.)

38. Section 22 of the Network Solutions T's and C's evidences MS AB's consent to the foregoing provision:

**22. AGREEMENT TO BE BOUND.** By applying for a Network Solutions service(s) through our online application process or otherwise, or by using the service(s) provided by Network Solutions under this Agreement, you acknowledge that you have read and agree to be bound by all terms and conditions of this Agreement and documents incorporated by reference.

39. Copies of the Whois printout and excerpts from the Network Solutions T's and C's referenced above are annexed hereto as **Exhibit 4**.

2. *MS AB's Own Website Terms and Conditions Demonstrate Active, Ongoing, Substantial, and Persistent Contact in Virginia*

40. MS AB's website terms and conditions at [www.msab.com/site/terms](http://www.msab.com/site/terms) (the “**MS AB Web Site Terms**”), which are readily accessible in Virginia through MS AB's web site, demonstrate unequivocally that MS AB has an active presence in Virginia. According to the MS AB Web Site Terms:

Welcome to our website. If you continue to browse and use this web site, you are agreeing to comply with and be bound by the following terms and conditions of use, which together with our privacy policy govern MSAB's relationship with you in relation to this website. If you disagree with any part of these terms and conditions, please do not use our website.

41. The MS AB Website Terms specifically define pronouns used throughout the pages of the web site to refer to MS AB, providing:

The term 'Micro Systemation AB,' 'MSAB' or 'us' or 'we' refers to the owner of the website whose registered office is Hornsbruksgatan 28, SE 11734 Stockholm, Sweden. . . .

42. The MS AB Website Terms also provide a direct contact email address to its headquarters in Sweden, using the defined pronoun "us," providing: "Should you wish to update, correct, or remove your personal data from our registers, **please contact us by email to sales@msab.com.**" (emphasis added.)

43. MS AB, relying on the terms it chose to define in the MS AB Website Terms, "MSAB," "us," or "we," is involved with specific, ongoing, and persistent business conduct in Virginia as facilitated by its web presence.

(a) MS AB Solicits Employees in Virginia

44. MS AB uses its web site to recruit Virginia employees.

45. MS AB recruited a Virginia employee for the position of "Customer Support (Technical)." On MS AB's "Careers" page of its web site at [www.msab.com/company/careers](http://www.msab.com/company/careers), MS AB actively targeted Virginia candidates, using the defined pronoun, "we," stating:

**We are seeking a Customer Support specialist to support both technical and commercial needs of the business. In this position, you will use your detailed knowledge of Micro Systemation's specialized forensic and cellex technology to support existing customers in technical and maintenance questions. *As a first point of contact*, you will apply first class customer services to handle client requests, develop solutions and resolve problems in a professional manner. . . .**

This position will also work closely with sales team to align activities for target markets, customer service, product development and to plan and attend trade shows/seminars.

46. Implying that the Virginia employees have their job training at the Swedish headquarters, this posting explains that “[o]nce your training is completed, you will be based out of their Alexandria, Virginia office . . . .”

47. In another posting, MS AB targeted other Virginia candidates for an “Inside Sales Representative” position “based in Alexandria, VA,” explaining: Micro Systemation is seeking an Inside Sales Representative to help grow their market share in North America . . . .”

48. The posting closed with the following offer, using the defined pronoun “we”:  
“**We offer** the right person excellent growth opportunities and a comprehensive compensation package.”

(b) MS AB Targets Virginia Customers to Purchase Products Via its Website

49. In addition to directly targeting Virginia candidates for employment, MS AB allows customers in Virginia to purchase products through its web site. In a web page entitled “Web Shop,” with the domain address [www.msab.com/sales/web-shop](http://www.msab.com/sales/web-shop), MS AB explains that:

“The Micro Systemation webshop is accessible through the Customer portal Log-in [which contains a hyperlink to such customer portal]. The new Customer Portal allows existing customers access to more support information, to purchase items from the webshop, book training and also download the latest versions of the XRY forensic Pack.

If you are an existing customer and would like to purchase accessories, components or cables then please login to the customer portal on the above link.  
. . . .

If you are a new customer and do not have a Log-in or you have lost your username and password details please contact **us.**”

50. Additionally, at [www.msab.com/downloads](http://www.msab.com/downloads), customers in Virginia can directly download MS AB's XRY software through MS AB's customer portal. The download web page provides, "If you would like to download the latest full version of XRY, please log in to the Customer Portal >>."

(c) MS AB Allows Virginia Customers to Book training Through Its Website

51. Again using its defined pronoun, MS AB's "Booking Training" page on its web site, [www.msab.com/booking-training](http://www.msab.com/booking-training), provides: "If you would like to book training with us please use the Customer Portal Log-in."

52. Importantly, in a blatant manifestation of its presence in Virginia, MS AB writes in its Booking Training page that:

If you are a new customer and do not have a Log-in or you have lost your username and password details, please contact us at [sales@msab.com](mailto:sales@msab.com).

Alternatively, you can call us during office hours on the numbers below:  
Head Office: +46 8739 0270  
USA: +1 703-750-0068  
UK: 0808 234 2450 (local number only)

or alternatively fill out the form here on our "Contact" link>>.

b. General Personal Jurisdiction Through Control of MSAB, Inc.

53. The Court also has general personal jurisdiction over MS AB in Virginia by virtue of MS AB's domination and control over its wholly owned subsidiary MSAB, Inc., based in Alexandria, Virginia. In fact, as supported by the MS AB 2012 Annual Report, and the facts described above in paragraphs 13-15 above, MSAB, Inc. is nothing more than the alter-ego of MS AB for jurisdictional purposes.

54. In fact, the separate personalities of the two defendants do not exist. According to the MS AB 2012 Annual Report, the "CEO of Micro Systemation is also the CEO of the

company's subsidiaries in England and the U.S.A. *He is responsible for developing and executing Micro Systemation's strategies to reach its goals.*" See MS AB 2012 Annual Report at page 47 (emphasis added).

55. Insofar as MSAB, Inc. does not possess the basic indicia of a separate and independent business and because the business operations, management, human resources, product development, and finance department of MS AB undoubtedly supports MSAB, Inc.'s activities in Virginia and the rest of the United States, MS AB exerts significant control over MSAB, Inc.'s activities and operations in Virginia to such degree as to render MSAB, Inc. a mere instrumentality of MS AB.

56. To be sure, with the same CEO and no executive management in Virginia, MS AB controls and has the right to control key aspects of MSAB, Inc.'s operations in Virginia.

57. Indeed, MSAB, Inc. is nothing more than an agent of MS AB and functions as a representative of MS AB in Virginia.

58. MSAB, Inc. manifests MS AB's presence in Virginia.

c. Specific Personal Jurisdiction Under Virginia Long-Arm Statute

59. The Court has specific personal jurisdiction over MS AB under the Virginia long-arm statute, Virginia Code § 8.01-328.1(A)(3-4), insofar as:

(1) MS AB caused tortious injury to Plaintiffs by acts in the Commonwealth of Virginia (including the use of computers and computer networks); and

(2) MS AB caused tortious injury to Plaintiffs in the Commonwealth of Virginia by acts outside of the Commonwealth of Virginia while regularly conducting or soliciting business, engaging in a persistent course of conduct, and deriving substantial revenue from goods rendered and services performed in Virginia.

60. As further elaborated below, MS AB has caused tortious injury to Plaintiff by acts inside and outside of Virginia including its misappropriation and sale of Cellebrite's Trade

Secrets; infringement and contributory infringement of Cellebrite's copyrighted software; infringement of Cellebrite USA's trademarks; and unfair competition by purchasing Google AdWords containing Cellebrite USA's trademarks and trade names.

61. Such causes of action are manifested through an unlawful scheme with MSAB, Inc., including through use of MSAB, Inc.'s computers and computer network in Alexandria, located in the Eastern District of Virginia, in the planning, facilitating and performance of such a scheme to steal Cellebrite's trade secrets, reverse engineer Cellebrite's copyrighted software code, copy and integrate the code into MS AB's software products, and then market, sell and distribute infringing products containing Plaintiff's trade secrets and copyrighted software code in Virginia – all without Cellebrite's knowledge, information, or authorization. Such computers and computer servers in Virginia provided the medium for MS AB and MSAB, Inc. to plan and carry out this shockingly unlawful scheme.

62. Such activities are further manifested through MS AB's use of Cellebrite's trademark and trade names comprising trademark infringement and unfair competition. MS AB's web site intentionally misappropriates sales by seeking to convert customers and potential customers of Plaintiffs in Virginia. Pursuant to such unlawful action, MS AB and/or MSAB, Inc. purchased the Google AdWord "Cellebrite" – a registered trademark of Cellebrite USA – in order to confuse web surfers – including in Virginia – who search for information about Cellebrite– to instead click through to [www.msab.com](http://www.msab.com) – MS AB's web site. MS AB is thus free riding on Cellebrite's reputation and goodwill and deceitfully directing Cellebrite's customers and potential customers to MS AB's web site.

63. Such activities caused “tortious injury” insofar as each of the foregoing causes of action (copyright infringement; misappropriation of trade secrets; and trademark infringement) are based in tort.

64. Plaintiffs have over 100 customers based in Virginia and have sold over 1800 UFED Units in Virginia.

65. Due to MS AB’s actions, Plaintiffs suffered tortious injury in Virginia, including lost sales from Plaintiffs’ existing and potential Virginia-based customers, as well as damage to Plaintiffs’ goodwill and reputation, where MS AB and MSAB, Inc. are unlawfully competing against Plaintiffs with Plaintiffs’ own technology.

66. Plaintiffs’ claims arise out of such activities by MS AB in Virginia and the exercise of personal jurisdiction over MS AB is therefore constitutionally reasonable and appropriate.

**C. Venue**

67. Venue in the Eastern District of Virginia is proper pursuant to 28 U.S.C. § 1391(b)(2) and (3).

68. Venue in the Alexandria Division is proper pursuant to Local Civil Rule 3 of the Local Rules for the U.S. District Court for the Eastern District of Virginia.

**STATEMENT OF FACTS**

**A. Overview of Cellebrite Products**

69. Cellebrite is a global manufacturer of devices used by law enforcement agencies, including the U.S. DHS, the Federal Bureau of Investigation, and state and local law enforcement agencies, to extract data from mobile phones for forensic purposes.

70. Cellebrite's cutting edge product is marketed and sold under the trade name, "UFED," which stands for Universal Forensic Extraction Device, a high-end mobile forensics solution, which extracts, decodes, and analyzes actionable data from legacy and smartphones, tablets, and portable GPS devices for use by law enforcement agencies.

71. Cellebrite and Cellebrite USA compete directly with MS AB and MSAB, Inc. In fact, MS AB devoted an entire paragraph to Cellebrite on page 8 of the MSAB 2012 Annual Report, acknowledging Cellebrite's competitive prowess, by stating:

Cellebrite is a worthy competitor, and their presence in the market contributes to ensuring that customers always have at least two tools to choose from for a criminal forensic analysis; in general terms, this is positive for the market. Cellebrite has a larger organization and were the first to penetrate into the US market, where they have a certain advantage. Nevertheless, they handle another section of the business, which, to some extent, has made them dependent on a specific hardware configuration, which is supplied together with their solution. In that respect, Micro Systemation has an advantage as it is more a software house and its products are not hardware dependent.

72. Cellebrite is recognized globally as a respected innovator and leader in identifying vulnerabilities in smartphones and developing methods to access and extract user data once those vulnerabilities are identified. While handset manufacturers work hard to prevent such intrusions, Cellebrite invests significant financial, labor, and other resources to develop its breakthrough solutions.



73. The process of accessing the memory of cellular phones and extracting the data is painstaking and delicate. Cellebrite's development of its innovative solutions takes thousands of hours led by elite teams of specially trained and highly qualified software engineers.

74. Cellebrite similarly invests significant funds in the marketing and promotion of its UFED products inside and outside the United States, including for sales to customers in Virginia.

75. Cellebrite's UFED solutions are comprised of two (2) key software components (which are in turn comprised of multiple proprietary elements): (1) the software (the "UFED Code") that runs on Cellebrite's proprietary UFED hardware units (the "UFED Units"); and (2) one or more types of boot loader code (the "Bootloader Software"), which are uploaded to, and run on, the mobile handset under analysis and which facilitate the infiltration, extraction, and download of data from the mobile handset to the UFED Units by communicating with the UFED Software.

**B. Cellebrite's Efforts to Maintain Confidentiality of Trade Secrets**

76. Cellebrite's proprietary software code, configuration, solutions, boot loader software, methodologies, routines, functions, and other proprietary information and trade secrets (collectively, the "Cellebrite Trade Secrets") are its most valuable assets. Cellebrite goes to great lengths and takes exacting precautions to protect the Cellebrite Trade Secrets from unauthorized use and disclosure.

77. Cellebrite and Cellebrite USA require all of their employees to sign employment agreements containing confidential information non-disclosure provisions, as a condition of their employment, prohibiting disclosure of the Cellebrite Trade Secrets without Cellebrite's authorization.

78. Cellebrite and Cellebrite USA also have a policy and practice of requiring all of

their consultants and contractors to sign non-disclosure agreements ("NDA's") to protect against unauthorized use and disclosure of the Cellebrite Intellectual Property.

79. Access to Cellebrite's source code is available to only restricted authorized personnel. All codes electronically communicated by Cellebrite by any means are generally sent via encrypted transmission.

80. Cellebrite has incorporated protections into the UFED Units in order to prevent the unauthorized access to Cellebrite Intellectual Property in the UFED and the code running on the mobile devices during the extraction process. For example, the software code running on the UFED Units is encrypted so that any person who would seek to access such code would need to spend significant intentional and wilful efforts to hack into, decrypt and then reverse engineer such code.

81. Only registered employees of Cellebrite and Cellebrite USA subject to non-disclosure undertakings have access to Cellebrite's network, servers, and virtual private network ("VPN"). Cellebrite employs network-type security features, such as, without limitation, firewalls. The passwords to access the network must be changed every several months for security purposes.

82. Cellebrite also employs physical security over the Cellebrite Trade Secrets. Its facilities are highly secured, maintained under lock and key, limited in access, and guarded by cameras and security personnel.

83. In fact, the UFED Units require that upon powering up for the first time, the users must read and accept Cellebrite's End-User License Agreement (the "Cellebrite EULA") in order to access the UFED Unit and execute the programs for data extraction. The Cellebrite EULA confirms the confidential nature of the Cellebrite Trade Secrets.

84. The Cellebrite EULA contains clear and unambiguous provisions that prohibit any UFED user from altering Cellebrite's software. For example, **Section 1.2 of the Cellebrite EULA** provides that Licensee may not:

“(ii) in any way copy, alter, translate, decompile (or attempt to derive the source code of the UFED Software), modify or reverse engineer the UFED Software”;

“(iii) remove, alter or cause not to be displayed, any trademarks, copyright notices or start-up messages contained in the UFED Software”;

“(v) remove or attempt to remove or circumvent any security measures installed in the UFED Software.”

85. Section 5 of the Cellebrite EULA provides:

All Cellebrite Intellectual Property Rights shall be the sole property of Cellebrite and except for the licenses granted hereunder, Licensee shall have no rights or claims to the Hardware and the UFED Software (or any derivatives thereof) or any intellectual property in connection therewith. For the purpose of this agreement, the term “Cellebrite Intellectual Property Rights” shall mean any and all intellectual property rights in connection with the Hardware and the UFED Software, including, without limitation, the worldwide rights, whether or not perfected, associated with: (a) structure, organization and code of the UFED Software, works of authorship, copyrights, including moral rights, registrations and applications for registration thereof; (b) any invention, discovery, concept, composition, data, experiment, material, method, process, product and result; (c) patents, patent applications and all related continuations, divisional, reissue, utility models, design patents, applications and registrations thereof, certificates of inventions; (d) trade secrets, confidential information, know-how, designs, prototypes, enhancements, improvement, work-in progress, research and development information; (e) trade marks, trade marks applications, trade names, logos, product names, product manuals, training materials, documentation and other support materials, whether or not patented, copyrighted or trademarked; (f) software, firmware, network or product architectures, specifications, drawings, flow charts; and (g) all other proprietary rights relating to the foregoing.

C. **MS AB and MSAB, Inc. Hacked Into, Copied, Misappropriated, and Sold Cellebrite's Trade Secrets**

1. **The Cellebrite Samsung Solution**

a. **Development of the Cellebrite Samsung Solution**

86. In March 2011, Cellebrite released a breakthrough Samsung solution in its UFED version 2.0, which was the world's first forensic solution for physical extraction of Samsung mobile phones (the "**Cellebrite Samsung Solution**").

87. The physical extraction function enables the extraction of deleted data from the phone in addition to undeleted data. In addition to the ability to extract deleted data, the Cellebrite Samsung Solution can be used while the phone is already powered up and it is not required for the phone to first be powered down, like all previous solutions. This function is very sophisticated, was the first of its kind, and is still unique today.

88. The Cellebrite Samsung Solution took thousands of hours to develop by a team of highly trained, experienced Cellebrite software engineers.

89. Cellebrite's Samsung Solution contains no less than **six (6)** key proprietary innovations, including:

1. Identification of a unique vulnerability in the random access memory ("**RAM**") of Samsung phones allowing Cellebrite to inject and run its software directly on the phones;

2. Identification of specific landing site locations -- referred to as "**Loading Addresses**" -- on the Samsung phone RAM where Cellebrite could inject and run its own software for each of the models of Samsung phones;

3. Development of proprietary Cellebrite Samsung bootloader software (the "**Cellebrite Samsung Bootloader**") that runs on the Samsung mobile device's RAM to gather personal data and extract such data for download to Cellebrite's UFED Units.

4. A magic command "**0xB7**" that facilitates communication between Cellebrite's Samsung Bootloader and the Samsung phone's RAM (the "**Magic Command**").

5. Identification and sequencing of USB communication software code signatures for the Samsung mobile device models that are supported by Cellebrite's Samsung Bootloader (the "**USB Communications Signatures**").

6. Development of a proprietary algorithm that allows for innovative searching and identification of the Samsung model on which the UFED is running in order to select the correct USB Communications Signatures in Cellebrite's Samsung Bootloader (the "**Model Signature Search Algorithm**").

b. **Cellebrite Samsung Bootloader Copyright Registration**

90. Cellebrite owns a registered U.S. copyright for the source code for the Cellebrite Samsung Bootloader, TXu001739934/2011-02-09 (Title: "UFED Physical Boot-Loader") (the "**Cellebrite Samsung Bootloader Copyright**").

91. In accordance with the section entitled: "Computer Programs Containing Trade Secrets" in U.S. Copyright Office Circular 61, when filing the source code for the copyright application for the Samsung Bootloader Copyright, Cellebrite deposited the first 25 and last 25 pages of source code with portions containing trade secrets blocked out to protect such trade secrets from disclosure.

2. **The Cellebrite BlackBerry Solution**

a. **Development of the Cellebrite BlackBerry Solution**

92. In January 2012, Cellebrite released a BlackBerry extraction solution in its UFED version 1.1.9.0 (the "**Cellebrite BlackBerry Solution**").

93. This cutting edge solution – a world first – was based upon an exclusive discovery of a vulnerability in the BlackBerry mobile device's validation process of the manufacturer's digitally signed software code delivered by BlackBerry desktop software to the BlackBerry mobile device.

94. The exploitation of this vulnerability was a complex process and involved substantial research.

95. The development of an advanced methodology by Cellebrite to access the BlackBerry mobile device through such vulnerability, upload Cellebrite's proprietary boot loader software, and then extract the data from the BlackBerry mobile device, among other related innovations, was extensive and took thousands of hours to develop by a team of highly trained, experienced Cellebrite software engineers.

96. Cellebrite's BlackBerry Solution contains no less than **ten (10)** key proprietary innovations:

1. Identification and extraction of a BlackBerry digitally signed bootloader software program buried in BlackBerry desktop software (The "**BlackBerry Signed Bootloader**"), using the April 2011 version of BlackBerry's desktop software;

2. Development of a boot loader software program that could run on the BlackBerry phone RAM (the "**Cellebrite Unsigned Bootloader**") that would piggyback on the BlackBerry Signed Bootloader, thus tricking the extremely sophisticated BlackBerry security protocols to allow the Cellebrite Unsigned Bootloader to run on the BlackBerry phone;

3. Development of a physical extraction payload that would locate, gather and allow for the extraction of data on the RAM for download to the UFED Unit (the "**Physical Extraction Payload**").

4. Transmission of the Cellebrite Unsigned Bootloader with the BlackBerry Signed Bootloader and the Physical Extraction Payload over the BlackBerry communications protocol using randomly selected distances between each of these three programs on the BlackBerry communications protocol.

5. Landing the Cellebrite Unsigned Bootloader on the RAM of the BlackBerry mobile device in a Loading Address where the BlackBerry Signed Bootloader usually resides and relocating the BlackBerry Signed Bootloader to a usually unused Loading Address.

6. Creating a "jumper" function on a specific location of the Cellebrite Unsigned Bootloader, which activates the proprietary stack changer function developed by Cellebrite as part of the Cellebrite BlackBerry Solution (the "**Stack Changer**"), for integrating actions between the Cellebrite Unsigned Bootloader and the BlackBerry Signed Bootloader.

7. Using BlackBerry command number 8 to act as the launching location for the Physical Extraction Payload.

8. Developing proprietary USB pointer and cache functions on the Cellebrite Physical Extraction Payload.

9. Developing a proprietary OneNAND initialization function (the “**OneNAND Initialization**”); and

10. Writing a unique ownership string code (the “**Ownership String**”) on the Cellebrite Unsigned Bootloader.

b. **Cellebrite BlackBerry Solution Copyrights**

97. Cellebrite owns registered U.S. copyrights for: (i) the boot loader (payload) code for the BlackBerry solution, which contains the Physical Extraction Payload (referred to for purposes of the copyright registration as “(BB) Boot Loader” -- TXu 001860358) (the “**BB Boot Loader Copyright**”); and (ii) the code contained in the Cellebrite Unsigned Bootloader, which patches the BlackBerry boot loaders through the jumper, generates the Stack Changer function and implements the communication with BlackBerry devices (referred to for purposes of the copyright registration as “(BB) Stack Changer” -- TXu 001860356) (the “**BB Stack Changer Copyright**”). The (BB) Boot Loader Copyright and the (BB) Stack Changer Copyright comprise core elements of the Cellebrite BlackBerry Solution.

98. In accordance with the section entitled: “Computer Programs Containing Trade Secrets” in the U.S. Copyright Office Circular 61, when filing the source code for the copyright application for the (BB) Boot Loader Copyright and (BB) Stack Changer Copyright, Cellebrite deposited the first 25 and last 25 pages of each of the source codes with portions containing trade secrets blocked out to protect such trade secrets from disclosure.

3. **MS AB Software Products**

99. MS AB is a developer and seller of software solution that is used for the extraction of data from mobile devices, known as XRY.

100. In contrast to Cellebrite’s mobile extraction solutions which run on Cellebrite’s proprietary UFED units, MS AB’s “XRY” is a software only solution designed to run on the

Windows operating system in a laptop or desktop computer. The data extraction is performed when a mobile phone is connected via USB cable to a computer running the XRY software.

101. MS AB also sells various USB cables for each of the phones that are supported by the XRY software and other accessories.

**4. MS AB and MSAB, Inc. Infringement and Misappropriation**

102. Based upon Cellebrite's evaluation and analyses of MS AB's XRY software, after decryption and reverse-engineering, including deep analysis by a nationally renowned software expert, it is apparent that MS AB has engaged in a systematic and continuing campaign to extract, decrypt, reverse engineer, copy, and integrate Cellebrite Trade Secrets, proprietary code, and methodologies into MS AB's XRY solutions to create a product offering comprised of Cellebrite Trade Secrets and copyrighted software that competes directly with Cellebrite's products.

**a. MS AB's Misappropriation of the Cellebrite Samsung Solution**

103. In May 2012 -- fourteen (14) months after Cellebrite released the Cellebrite Samsung Solution -- MS AB released XRY version 6.3 ("**MS AB's Infringing Samsung Solution**"), which essentially mimics Cellebrite's Samsung Solution in methodology, code, and execution.

104. A careful analysis of MS AB's Infringing Samsung Solution shows that MS AB has incorporated Cellebrite Trade Secrets, including algorithms, strategies, methods and code signatures, and elements protected by the Cellebrite Samsung Bootloader Copyright.

**1. MS AB's Configuration File Contains Cellebrite Technology**

105. Inexplicably, MS AB's Infringing Samsung Solution contains a specific reference to Cellebrite's Samsung Bootloader, containing the following line, brazenly using the



“Cellebrite” name in the name of its code file – which would appear to demonstrate that to execute the extraction in MS AB’s Infringing Samsung Solution, the program is directed to execute Cellebrite’s Samsung Bootloader: “D:\Boot\cellebrite\Cellebrite\_Samsung MSM6280Loader.”

## 2. MS AB Copied Cellebrite’s Magic Code

106. MS AB also included the Magic Code, “0xB7,” which was arbitrarily created by Cellebrite, in MS AB’s Infringing Samsung Solution. Diagram 1 below contains a capture of the configuration file in MS AB’s Infringing Solution reflecting MS AB’s reference to Cellebrite’s Samsung Bootloader and the Magic Code, which are highlighted for reference.

### Diagram 1.

[Device]

```
Manufacturer="Samsung"  
Name="Samsung SGH-G800"  
Type=Phone  
FormFactor=Slider  
GUID={11FD1067-E17A-485C-9001-0FC7C956D46F}  
SupportedMedia=Cable,Bluetooth  
TAC=357968,35796801  
...
```

```
Loader="D:\Boot\cellebrite\Cellebrite_SamsungMSM6280Loader"  
LoaderAddr=0x02510000  
LoaderChunkSize=0x8  
LoaderPatch=MSM6280_G800
```

```
NandDispName=Nand  
NandBaseAddr=0x60000000  
NandSize=0x10800000  
NandChunkSize=0x210
```

```
NandReadCmd=0xB7  
NandReadFunc=NAND
```

```
ALOCSetupData=0x0000,0x0004,0x0000,0x000C  
PRBNSetupData=0x01000000,0x00000060
```

INTNSetupData=0x01000000,0x00000060,0x00020000,0x10000000,0x20000000,0x00400000,0x00000000,0x00000000 ;second parameter=nand base addr, dunno about the rest

107. In addition to the above obvious duplications, MS AB's Infringing Samsung Solution contains the identical Loading Address "0x02510000" on the Samsung phone RAM that Cellebrite used for the same Samsung device referenced in MS AB's configuration file, in this case model: SGH-6800.

108. The MS AB programmer that copied Cellebrite's software apparently did not fully understand the software code and left a note in the MS AB Infringing Samsung Solution demonstrating this lack of understanding, which has no functional utility in the MS AB Infringing Samsung Solution: "dunno about the rest" – as in "*I do not know about the rest*" of the Cellebrite code.

### 3. MS AB Copied Cellebrite's USB Communication Signatures

109. MS AB utilized identical USB Communications Signatures and signature lengths from the Cellebrite Samsung Bootloader. **Diagram 2** below illustrates these identical signatures from an excerpt of the Cellebrite Samsung Bootloader and MS AB's Infringing Samsung Solution bootloader. Each different color below represents one (1) signature. The signatures highlighted in yellow in both examples below are identical; the signatures highlighted in green in both examples below are identical; the signatures highlighted in orange in both examples below are identical; and the signatures highlighted in purple in both examples below are identical.

110. In addition to MS AB's copying of each of the USB Communications Signatures, the sequence of the USB Communications Signatures listed MS AB's Infringing Samsung Solution are the same as in Cellebrite's Samsung Bootloader, which were listed in such sequence based upon a random timing of completion of Cellebrite's internal development process.

**Diagram 2.**

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	
000000140	0000A0E3	F7FFFEA	F3B50E1C	0D1C1A36	.....	6																											
000000150	00270124	81B00000	F3B50D00	81B00024	..S.....	S																											
000000160	00262800	1A300090	01270000	F3B50F00	.&(.0...'	.....																											
000000170	1A370025	0C000126	81B00000	F3B50D1C	.7.&....&	.....																											
000000180	0E1C1A35	012481B0	0C000000	880051E3	...5.S.....	Q.																											

The 4 signatures, as they appear in a hexadecimal representation of Cellebrite's boot-loader

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	
000000BE0	550A0000	00000000	F3B50E1C	0D1C1A36	U.....	6																											
000000BF0	00270124	81B00000	F3B50D00	81B00024	..S.....	S																											
000000C00	00262800	1A300090	01270000	F3B50F00	.&(.0...'	.....																											
000000C10	0C000126	81B00000	0D1C0E1C	1A350124	...&.....	S																											
000000C20	81B00000	00000200	00000000	00001000	.....																												

The 4 signatures, as they appear in a hexadecimal representation of MSAB's boot-loader

4.

### MSAB Copied Cellebrite's Model Signature Search Algorithm

111. In addition to copying the USB Communications Signatures, MS AB also copied the Model Signature Search Algorithm. Diagram 3 below is a comparison of the Model Signature Search Algorithm that uses the USB Communications Signatures and MS AB's search function.

**Diagram 3.**

```

for (addr = start_addr; addr < end_addr; addr+=2)
{
    if ( !memcmp((unsigned char *)addr, diagpkt_alloc1, sizeof(diagpkt_alloc1)) ||
        C( !memcmp((unsigned char *)addr, diagpkt_alloc2, sizeof(diagpkt_alloc2)) ||
          D( !memcmp((unsigned char *)addr, diagpkt_alloc3, sizeof(diagpkt_alloc3)) ||
            E( !memcmp((unsigned char *)addr, diagpkt_alloc4, sizeof(diagpkt_alloc4)) )
          )
        )
        {
            F. diagpkt_alloc_addr = addr + 1;
            G. return make_packet(FRAMER_SEND_TYPE_OK, (void *)&diagpkt_alloc_addr, 4);
        }
}
return NULL;

```

Part of the source from Cellebrite's boot-loader

```

A. while ( v3 < v4 )
{
    if ( !memcmp(v3, (int)&v14, 14u)
        C. || !memcmp(v3, (int)&v13, 18u)
        D. || !memcmp(v3, (int)&v9, 14u)
        E. || !memcmp(v3, (int)&v6, 12u) )
    {
        F. =( _DWORD *) (v1 + 12) = v3 + 1;
        G. return sub_2513A94(1, v1 + 12, 4u);
    }
    H. v3 += 2;
}
return 0;

```

Code generated from  
Cellebrite's boot-

```

A. while ( v1 != 0xA33AA31A )
{
    if ( !memcmp(v1, 0xB5F3, 14)
        && !memcmp(v1, byte_BE8, 14)
        C. || !memcmp(v1, byte_BF6, 18)
        D. || !memcmp(v1, byte_C08, 14)
        E. || !memcmp(v1, byte_C16, 12) ) )
    {
        F. v2[1] = v1 + 1;
        G. return 0;
    }
    H. v1 += 2;
}
return 3;

```

Code generated from  
MSAB's boot-loader

112. Moreover, the MS AB Infringing Samsung Solution contains software code signatures for phones that Cellebrite created in the process described above, which MS AB does not support.

b. MS AB's Misappropriation of the Cellebrite BlackBerry Solution

113. In November 2012 -- ten (10) months after Cellebrite released the Cellebrite BlackBerry Solution -- MS AB released XRY version 6.4.1 ("MS AB's Infringing BlackBerry Solution"), which essentially mimics Cellebrite's BlackBerry Solution in code, methodology, and execution.

114. In particular, MS AB's Infringing BlackBerry Solution contains Cellebrite's identical innovative method of piggybacking an unsigned boot loader onto BlackBerry's Signed

Bootloader in order to bypass BlackBerry's sophisticated security protocols. In addition, although MS AB released its infringing solution long after Cellebrite released the Cellebrite BlackBerry Solution – and after BlackBerry issued updated versions of the BlackBerry Signed Bootloader – MS AB used the same April 2011 BlackBerry Signed Bootloader version as Cellebrite, which makes no sense and further illustrates that MS AB copied Cellebrite's BlackBerry Solution.

**1. MS AB Copied Cellebrite's Bootloader Addresses and Distances**

115. MS AB's Infringing BlackBerry Solution contains the identical Loading Addresses on RAM and distances between the boot loaders and physical extraction payload on their code for running its boot loaders as in the Cellebrite BlackBerry Solution. **Diagram 4** below illustrates the identical loading addresses and similarities between the distances between the boot loaders on the communications protocol used by MS AB.

116. **Diagram 4** represents captures of the USB communications between a BlackBerry device and Cellebrite's UFED Unit (at the top) and a BlackBerry device and MS AB's MS AB's Infringing BlackBerry Solution (at the bottom) using an USB Protocol Analyzer.

117. The marked numbers (0x18000000, 0x18018000, and 0x18024000) are loading addresses in RAM in the BlackBerry phone that receive the three different payloads. The lowest address is required by the BlackBerry Model, but the other two addresses were selected arbitrarily by Cellebrite out of a range of many usable addresses, further demonstrating that MSAB copied the code from Cellebrite's BlackBerry Solution.

118. The distances between the addresses are also virtually identical, which is evidence that Cellebrite's entire code was copied by MS AB.

**Diagram 4:**

OUT Bulk transfer	2	4	0	OK	FS	24 bytes (01 00 18 00 46 39 08 86 14 00 00 00 01 00 09 F0 <u>00 00 00 18</u> 54 FD 00 00)	7.335 719 550
OUT Bulk transfer	2	4	0	OK	FS	24 bytes (01 00 18 00 BD E5 9E C9 14 00 00 00 00 01 09 F0 <u>00 00 01 18</u> 54 36 00 00)	7.723 999 700
OUT Bulk transfer	2	4	0	OK	FS	24 bytes (01 00 18 00 61 3E C5 C7 14 00 00 00 38 01 09 F0 <u>00 45 07 18</u> 54 FD 00 00)	7.806 734 950

*Cellebrite's boot loader addresses*

OUT Bulk transfer	5	4	0	OK	FS	24 bytes (01 00 18 00 46 39 08 86 14 00 00 00 01 00 09 F0 <u>00 00 00 18</u> 54 FD 00 00)	19.642 019 933
OUT Bulk transfer	5	4	0	OK	FS	24 bytes (01 00 18 00 31 47 D7 79 14 00 00 00 FD 01 09 F0 <u>00 00 01 18</u> C4 26 00 00)	20.259 150 283
OUT Bulk transfer	5	4	0	OK	FS	24 bytes (01 00 18 00 EB E2 4B 79 14 00 00 00 4C 02 09 F0 <u>00 40 07 18</u> 54 FD 00 00)	20.360 053 517

*Micro Systemation's boot loader addresses*

**2. MS AB Copied Cellebrite's Stack Changer Function and Jumper**

119. MS AB's Infringing BlackBerry Solution also contains the identical copyrighted Stack Changer function, and uses the same "jumper" on its unsigned bootloader as on the Cellebrite Unsigned Bootloader. While Cellebrite selected a specific location for the jumper out of many available options, MSAB's location is identical to that choice. There are many locations that could have been effectively used as jumpers, and each of them would have been valid.

120. **Diagram 5** below further shows a side by side comparison of the Cellebrite Stack Changer function binary code next to the MS AB stack changer function binary code. The diagram shows highlighted code that is virtually identical, further confirming that MS AB copied the code from Cellebrite.

**Diagram 5.**

1F002DE9 50009FE5 00005EE1 1000003A	1F002DE9 4C009FE5 00005EE1 0F00003A
020CA0E3 000050E3 0D00000A 00108DE0	020CA0E3 000050E3 0C00000A 38109FE5
003091E5 38209FE5 020053E1 0600003A	00208DE0 003092E5 010053E1 0500003A
012C82E2 020053E1 0300002A 1C409FE5	011C81E2 010053E1 0200002A 013543E2
043043E0 003081E5 010000EA 040040E2	003082E5 010000EA 040040E2 F0FFFFFFEA
FFFFFFFEA 1F00BDE8 1EFF2FE1 00004080	1F00BDE8 1EFF2FE1 00004080 C88C4080
00004000 C88C4080	

*Cellebrite's Stack Changer binary code*

*Micro Systemation's Stack Changer binary code*

**3. MS AB Copied Cellebrite's Use of "Command Number 8"**

121. Another example of obvious copying is MS AB's use of "Command Number 8" in MS AB's Infringing BlackBerry Solution to trigger execution of the physical extraction payload, which is virtually identical to the Cellebrite BlackBerry Solutions use of Command Number 8.

122. **Diagram 6** below shows MS AB's infringing implementation of the Command 8 trigger for execution of the physical extraction payload, and Cellebrite's Command 8 implementation. Diagram 6 represents captures of the USB communications between a BlackBerry device and Cellebrite's UFED Unit (at the top) and a BlackBerry device and MS AB's Infringing Blackberry Solution (at the bottom) using a USB Protocol Analyzer.

123. The highlighted number "0008" is a command number, part of BlackBerry's protocol that by default is an unused command. Cellebrite patched the BlackBerry Signed Bootloader and used Command 8 as a gateway to the Cellebrite Physical Extraction Payload for its extraction process.

124. There are a several other unused BlackBerry commands that Cellebrite could have used for this purpose, and it is highly unlikely that MS AB would use the exact same command used by Cellebrite without copying.

**Exhibit 6:**

☒ ↻ OUT Bulk transfer	2	1	0	OK	FS	32 bytes (00 00 20 00 <b>08 00</b> 38 00 50 49 4E 47 03 00 00 00 4F 4D 47 20 50 49 4E 47 ...)
☒ ↻ IN Bulk transfer	2	1	0	OK	FS	36 bytes (00 00 24 00 72 70 6C 79 50 49 4E 47 2B 6F 6B 2B 03 00 00 00 4F 4D 47 2...
☒ ↻ OUT Bulk transfer	2	1	0	OK	FS	28 bytes (00 00 1C 00 <b>08 00</b> 00 00 49 54 4F 4E 04 00 00 00 00 00 A0 8D C4 6A 6...
☒ ↻ IN Bulk transfer	2	1	0	OK	FS	40 bytes (00 00 28 00 72 70 6C 79 49 54 4F 4E 2B 6F 6B 2B 0C 00 00 00 00 08 00 0...
☒ ↻ OUT Bulk transfer	2	1	0	OK	FS	32 bytes (00 00 20 00 <b>08 00</b> 00 00 52 44 4F 4E 08 00 00 00 00 00 00 00 00 00 00 ...)
☒ ↻ IN Bulk transfer	2	1	0	OK	FS	4.15 kB (00 00 9C 10 72 70 6C 79 52 44 4F 4E 2B 6F 6B 2B 80 10 00 00 26 0B 0D 06...

*Cellebrite's protocol as payload for command #8*

☒ ↻ OUT Bulk transfer	4	2	0	OK	FS	14 bytes (00 00 0E 00 <b>08 00</b> 00 00 00 01 00 00 00 01)
☒ ↻ IN Bulk transfer	4	2	0	OK	FS	10 bytes (00 00 0A 00 00 01 00 00 00 01)
☒ ↻ OUT Bulk transfer	4	2	0	OK	FS	14 bytes (00 00 0E 00 <b>08 00</b> 00 00 00 02 00 00 00 02)
☒ ↻ IN Bulk transfer	4	2	0	OK	FS	24 bytes (00 00 18 00 00 02 0E 00 44 00 00 00 00 00 00 08 40 00 40 08 00 05 4A 0A)
☒ ↻ OUT Bulk transfer	4	2	0	OK	FS	18 bytes (00 00 12 00 <b>08 00</b> 00 00 00 03 04 00 00 00 00 20 04 23)
☒ ↻ IN Bulk transfer	4	2	0	OK	FS	12.2 kB (00 00 D4 30 00 03 CA 30 07 00 01 38 03 0C 00 00 00 00 11 EE 10 0F C0 E3...

*MS AB 's protocol as payload for command #8*

**4. MS AB Copied Cellebrite's USB Communications and Cache Functions**

125. As described above, the pointers to USB communications and cache functions in the parameters of Cellebrite's Physical Extraction Payload were critical to the exploitation process. MS AB adopted virtually identical usage of these two critical functions in MS AB's Infringing BlackBerry Solution. **Diagram 7** below illustrates the identical use of global variables in both Cellebrite and MSAB code. This is the binary code of Cellebrite's Physical Extraction Payload (at the top) and MS AB's payload (at the bottom).

126. Both solutions place the global variables immediately after the payload's main function, which in itself is uncommon, and is particularly unusual since these variables are not even used by the main function in MSAB's Infringing BlackBerry solution. The first number (highlighted in yellow) represents the address of the USB communications function, which is used for sending data from the BlackBerry device. The second number (highlighted in green) represents the address of the cache function, which is used during the actual extraction of the data.



**Diagram 7.**

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	
00000000	FF	5F	2D	E9	0C	D0	4D	E2	05	9A	8F	E2	06	00	A0	E1	.	_	.	.	.	M	.	.	.	.	.	.	.	.	.	.	.
00000010	04	10	A0	E1	2C	20	9F	E5	30	30	9F	E5	00	30	8D	E5	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
00000020	2C	30	9F	E5	04	30	8D	E5	28	30	9F	E5	08	30	8D	E5	,	0	.	.	.	0	.	.	.	.	.	.	.	.	.	.	
00000030	14	30	9F	E5	08	00	00	EB	0C	D0	8D	E2	FF	5F	B0	E8	.	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
00000040	1E	FF	2F	E1	68	82	2C	CD	BC	39	01	80	A0	8B	00	80	.	.	.	.	.	h	.	.	.	.	.	.	.	.	.		
00000050	90	6C	00	80	06	70	1E	1E	00	00	00	00	70	40	2D	E9	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	

Cellebrite's Physical Extraction Payload

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
00000000	30	40	2D	E9	0C	40	4F	E2	60	50	9F	E5	05	50	84	E0	0@	.	.	.	@	.	.	.	.	.	.	.	.	.	.	.
00000010	35	FF	2F	E1	30	80	B0	E8	00	00	00	00	54	4F	0A	80	5.	/	.	0	.	.	.	.	.	.	.	.	.	.	.	
00000020	54	8F	0A	80	BC	39	01	80	[REDACTED]	54	68	69	73	T	.	.	.	.	9	.	.	.	.	.	.	.	.	.	.	.		

MS AB's Physical Extraction Payload

*Communication function is in yellow.*  
*Cache related function is in green.*

**5. MS AB Copied OneNAND Initialization, Including Invalid Code**

127. MS AB's OneNAND initialization is also similar to Cellebrite's. **Diagram 8** below shows the OneNAND initialization function code after a Hex Rays IDA utility program was used to "decompile" binary code into source code. Similar lines of decompiled code are enclosed in rectangles of the same color. Of particular note is the black rectangle (which is labeled "use invalid command") in Cellebrite's OneNAND initialization code that contains an invalid command, which has no use, and should not even exist in a normal function.

**Diagram 8.**

### Cellebrite's OneNAND initialization

```

1 void __fastcall flash_init(int base)
2 {
3     int v1; // r900
4     int v2; // r401
5     int v3; // r501
6     int g_flash_page_size; // r001
7     int device_id; // r501
8     signed int pages_per_block; // r102
9
10    v2 = v1 + 1352;
11    =(_DWORD =)(v2 + 8) = base;
12
13    // use invalid command
14    =(_WORD =)(base + 0x1E440) |= 0x20u;
15
16    v3 = base + 0x1E000;
17    =(_WORD =)(v2 + 4) = 2 = =(_WORD =)(base + 0x1E000);
18
19    // page size calculation
20    =(_WORD =)(v2 + 6) = 2 = =(_WORD =)(base + 0x1E000);
21    =(_WORD =)v2 = div(=(_WORD =)(v1 + 1350), (unsigned int)=(_WORD =)(base + 0x1E000) >> 8);
22
23    g_flash_page_size = =(_WORD =)(v1 + 1352);
24
25    // page spare size calculation
26    =(_WORD =)(v1 + 1354) = 16 = =(_WORD =)(v1 + 1352) >> 9);
27
28    device_id = =(_WORD =)(v3 + 2);
29
30    // pages per block calculation
31    if ( g_flash_page_size == 0x200 )
32        pages_per_block = 0x20;
33    else
34        pages_per_block = 0x40;
35
36    // number of blocks calculation
37    =(_DWORD =)(v1 + 1364) = div(
38        0x1000000 << ((unsigned int)(device_id << 24) >> 28),
39        g_flash_page_size * pages_per_block);
40
41    =(_DWORD =)(v1 + 1368) = device_id & 8;
42
43
44
45
46
47

```

Cellebrite's initialization contains an invalid, non-functioning command

### Micro Systemation's OneNAND initialization

```

1 int __fastcall cmd_init_bb_onenand(NANDInfo *a_nand_info_out)
2 {
3     NANDInfo v_info_out; // r401
4     int v_onenand_base; // r501
5     int v_page_size_1; // r001
6     int v_page_size_2; // r601
7     unsigned int v_device_id; // r301
8     unsigned int v_device_id_size; // r301
9     signed int v_pages_per_block; // r102
10    __int16 v_number_of_blocks; // r004
11    __int16 v_page_spare_size; // r304
12
13    v_info_out = a_nand_info_out;
14    v_onenand_base = onenand_base;
15
16    // page size calculation
17    v_page_size_1 = div(2 = =(_WORD =)(onenand_base + 0x1E000), (unsigned int)=(_WORD =)(onenand_base + 0x1E000) >> 8);
18
19    // page spare size calculation
20    v_info_out->page_spare_size = (unsigned int)(v_page_size_1 << 16) >> 21;
21
22    v_info_out->page_size = v_page_size_1;
23
24    // use invalid command
25    =(_WORD =)(v_onenand_base + 0x1E440) |= 0x20u;
26
27    v_page_size_2 = v_info_out->page_size;
28    v_device_id = =(_WORD =)(v_onenand_base + 0x1E002);
29    v_info_out->device_id = v_device_id;
30    v_device_id_size = v_device_id >> 4;
31
32    // pages per block calculation
33    if ( v_page_size_2 == 0x200 )
34        v_pages_per_block = 0x20;
35    else
36        v_pages_per_block = 0x40;
37
38    // number of blocks calculation
39    v_number_of_blocks = div(0x1000000 << (v_device_id_size & 0xf), v_page_size_2 * v_pages_per_block);
40
41    v_page_spare_size = v_info_out->page_spare_size;
42    v_info_out->num_of_blocks = v_number_of_blocks;
43    v_info_out->total_page_size = v_page_size_2 * v_number_of_blocks + v_page_spare_size;
44    return 0;
45
46
47
48
49
50

```

MS AB's initialization contains the identical invalid command in the code initialization—there is no functional reason for this

**6. MS AB Copied Cellebrite's Ownership String Code**

128. Finally, the ownership string in the code for MS AB's Infringing BlackBerry Solution is almost identical as the code in the Cellebrite Physical Extraction Payload. Diagram 9 below illustrates the similarity between the ownership strings. On the left of both of the below examples is the binary computer code that once compiled is expressed in the English language on the right. The binary code and sequence is virtually identical, as is the compiled English language expression.

129. The top example is the binary code of the ownership string of Cellebrite's Physical Extraction Payload and the bottom example is the binary code of the ownership string of MS AB's payload.

**Diagram 9.**

F3FFFF3A	7040BDE8	0000A0E3	1EFF2FE1	...:p@...../.
54686973	20626F6F	742D6C6F	61646572	This boot-loader
2062656C	6F6E6773	20746F20	43656C6C	belongs to Cell
65627269	74650000	A8040000	04650000	ebrite.....e..

*Cellebrite's ownership string*

548F0A80	BC390180	C0250180	54686973	T....9...%..This
206C6F61	64657220	62656C6F	6E677320	loader belongs
746F204D	6963726F	20537973	74656D61	to Micro Systema
74696F6E	20414200	0000A0E1	0000A0E1	tion AB.....

*Micro Systemation's ownership string*

c. MS AB and MSAB, Inc. Acted in Concert to Copy Cellebrite's Trade Secrets and Intellectual Property

130. Upon information and belief, MS AB's officers, directors, and employees present in Virginia, directly and indirectly collaborated with MSAB, Inc.'s officers, directors, and employees, to purchase Cellebrite UFED Units in the United States for the express purpose of delivering such UFED Units to MS AB's development team in Sweden and then extracting,

decrypting, reverse engineering, copying, and integrating Cellebrite's Trade Secrets and copyrighted works into MS AB's products – for subsequent import, sale, and distribution of infringing products in Virginia and the rest of the United States.

131. Upon information and belief, this effort was undertaken using computers and computer servers based in, and routed to, Virginia, including saving and accessing files containing the Cellebrite Trade Secrets on such servers.

132. Upon information and belief, MS AB and MSAB, Inc. also regularly corresponded via e-mail through e-mail servers based in Sweden and Virginia, and stored Cellebrite's Trade Secrets and copyrighted works on email servers based in Virginia and Sweden in order to facilitate the integration of Cellebrite's Trade Secrets and copyrighted works into MS AB's infringing products.

133. Upon information and belief, once MS AB's engineers in Sweden reverse engineered, copied, and integrated Cellebrite's code into MS AB's products, MS AB and MSAB, Inc. then imported into Virginia and distributed MS AB's Infringing Samsung Solution and MS AB's Infringing BlackBerry Solution through the MS AB website and directly to customers, distributors, and others in Virginia and throughout the United States.

**D. Cellebrite USA's Trademarks**

134. Cellebrite USA is the registered owner of the "Cellebrite" character mark – Registration Number 3,678,338 (the "**Cellebrite Trademark**") with the U.S. Patent and Trademark Office. Cellebrite USA is also the owner of a registered design mark for "UFED System" design trademark Registration Number 3,706,018 (the "**UFED Trademark**").

135. Google Inc. ("**Google**") provides advertising services through its "AdWords" campaign, pursuant to which advertisers can purchase "keywords" which, when

entered by internet users, prompt advertisements of such websites to appear next to or above Google search results. Google advises ad purchasers to “pick specific keywords” when targeting users to their website. <http://www.google.com/adwords/how-it-works/target-your-ads.html#subid=ww-en-et-awhp2-1d2a3c4a5a6a7b&sourceid=awo>.

136. Google’s AdWords Terms and Conditions prohibit intellectual property infringement by advertisers. <https://support.google.com/adwordspolicy/answer/2562124>. “Advertisers are responsible for the keywords they choose to trigger their ads and the text they choose to use in those ads.”

137. Upon conducting a Google search of the term “Cellebrite” “Cellebrite.com,” or other terms which include the word “Cellebrite,” the results include an advertisement at the top of the search results leading the person searching the term “Cellebrite” to Defendants’ website [www.msab.com](http://www.msab.com). See screenshots annexed hereto as **Exhibit 4**.

138. Similarly, users are directed to Defendants’ website though Google advertisements when entering the terms “UFED” and “UFED system.” See **Exhibit 4**.

139. As such, it is evident that MS AB and/or MSAB, Inc. have deliberately selected the Cellebrite Trademark as their “keyword” to purchase advertising from Google through the “AdWords” campaign.

140. Defendants have also apparently purchased the “keywords” “UFED” and “UFED system,” among other marks, names, works and terms of Plaintiffs, leading a person entering such terms into the Google search window to Defendants’ website [www.msab.com](http://www.msab.com).

**Count I – Against MS AB**  
**(Copyright Infringement by MS AB of Cellebrite Samsung Bootloader Copyright:**  
**TXu001739934/2011-02-09 in Violation of**  
**Section 501(a) and Section 106(1; 2; 3) of the U.S. Copyright Act)**

141. Plaintiffs incorporate herein Paragraphs 1-140 above.

142. Cellebrite is the owner of the Cellebrite Samsung Bootloader Copyright. The Cellebrite Samsung Bootloader Copyright is a valid copyright registered with the U.S. Copyright Office.

143. Upon information and belief, MS AB's officers, directors, and employees collaborated and worked jointly and in concert inside and outside of the United States with MSAB, Inc.'s officers, directors, and employees to acquire from sources in the United States one or more UFED Units products in the U.S. which were delivered to MS AB's offices in Sweden for the purpose of copying Cellebrite's software code and reproducing it in MS AB's infringing derivative products, which were subsequently distributed and sold in the U.S.

144. MS AB unlawfully accessed Cellebrite's UFED Units, extracted and decrypted the Cellebrite Samsung Bootloader, and then reverse engineered, copied, and integrated the Cellebrite Samsung Bootloader into MS AB's Infringing Samsung Solution.

145. As further set forth above, there exists a substantial and striking similarity between the Cellebrite Samsung Bootloader protected by the Cellebrite Samsung Bootloader Copyright and MS AB's Infringing Samsung Solution.

146. Once MS AB copied and integrated the Cellebrite Samsung Bootloader into MS AB's Infringing Samsung Solution, MS AB imported and sold into the U.S., distributed, and continues to distribute such infringing products in the U.S.

147. Such infringing copies are sold via Internet downloads from MS AB's web site and by the supply of compact disks and flash memory devices by MS AB using international shipping methods for importation into the United States.

148. MS AB has violated Cellebrite's exclusive rights under the U.S. Copyright Act to the Cellebrite Samsung Bootloader Copyright to (i) reproduce the Cellebrite Samsung

Bootloader; (ii) prepare derivative works based on the copyrighted work; and (iii) to import into the U.S. and distribute copies of the copyrighted software to the public.

149. MS AB had actual or constructive knowledge that its acts constituted copyright infringement.

150. MS AB's infringement is willful and deliberate, and its conduct was intentional and undertaken with full knowledge, and with indifference to Cellebrite's rights.

151. Cellebrite has been damaged as a result of MS AB's infringement, and continues to be damaged by MS AB's infringement.

152. MS AB will continue its acts of copyright infringement and Cellebrite will continue to be injured as a result of such infringement unless enjoined by the Court.

153. Cellebrite has no adequate remedy at law to compensate Cellebrite for the damage suffered from MS AB's infringement of the Cellebrite Samsung Bootloader Copyright.

154. Cellebrite reserves the right, pursuant to 17 U.S.C. § 504(c) to elect to recover statutory damages for each infringement by MS AB, in lieu of seeking recovery of actual damages. As MS AB's infringement was intentional and willful, Cellebrite is entitled to an award of increased statutory damages under 17 U.S.C. § 504(c)(2).

155. Cellebrite is entitled to recover full costs and reasonable attorney's fees pursuant to 17 U.S.C. § 505.

**Count II – Against MSAB, Inc.**

**(Copyright Infringement by MSAB, Inc. of Cellebrite Samsung Bootloader Copyright: TXu001739934/2011-02-09 in Violation of Section 501(a) and Section 106(3) of the U.S. Copyright Act)**

156. Plaintiffs incorporate herein Paragraphs 1-155 above.

157. Without Cellebrite's authorization, MSAB, Inc. currently imports into the U.S., distributes, markets, and sells MS AB's Infringing Samsung Solution containing the Cellebrite

Samsung Bootloader via on-line downloads and by shipments of compact disks and flash memory devices from MSAB, Inc.'s offices in Alexandria, Virginia to customers in Virginia and throughout the United States.

158. MSAB, Inc. has violated Cellebrite's exclusive rights under the U.S. Copyright Act to distribute Cellebrite's copyrighted work to the public by sale or other transfer of ownership, or by rental, lease, or lending.

159. MSAB, Inc. has also violated Cellebrite's exclusive rights under the U.S. Copyright Act by importing Cellebrite's copyrighted work into the United States without authorization from Cellebrite.

160. MSAB, Inc. had actual or constructive knowledge that its acts constituted copyright infringement.

161. MSAB, Inc.'s infringement is willful and deliberate, and its conduct was intentional and undertaken with full knowledge, and with indifference to Cellebrite's rights.

162. Cellebrite has been damaged as a result of MSAB Inc.'s infringement, and continues to be damaged by MSAB Inc.'s conduct.

163. MSAB, Inc. will continue its acts of copyright infringement and Cellebrite will continue to be injured as a result of such infringement unless enjoined by the Court.

164. Cellebrite has no adequate remedy at law to compensate Cellebrite for the damage suffered from MSAB, Inc.'s infringement.

165. Cellebrite reserves the right, pursuant to 17 U.S.C. § 504(c) to elect to recover statutory damages for each infringement by MSAB, Inc., in lieu of seeking recovery of actual damages. As MSAB Inc.'s infringement was intentional and willful, Cellebrite is entitled to an award of increased statutory damages under 17 U.S.C. § 504(c)(2).



166. Cellebrite is entitled to recover full costs and reasonable attorneys' fees pursuant to 17 U.S.C. § 505.

**Count III—Against MS AB**  
**(Copyright Infringement by MS AB of (BB) Boot Loader Copyright and (BB) Stack**  
**Changer Copyright: in Violation of**  
**Section 501(a) and Section 106(1; 2; 3) of the U.S. Copyright Act)**

167. Plaintiffs incorporate herein Paragraphs 1-166 above.

168. Cellebrite is the owner of the (BB) Boot Loader Copyright and the (BB) Stack Changer Copyright, which are referred to collectively herein as the "**Cellebrite BB Copyrights.**" The Cellebrite BB Copyrights are valid copyrights registered with the U.S. Copyright Office.

169. Upon information and belief, MS AB's officers, directors, and employees collaborated and worked jointly and in concert inside and outside of the United States with MSAB, Inc.'s officers, directors, and employees to acquire from sources in the United States one or more UFED Units products in the U.S. which were delivered to MS AB's offices in Sweden for the purpose of copying Cellebrite's software code and reproducing it in MS AB's infringing derivative products, which were subsequently distributed and sold in the U.S.

170. MS AB unlawfully accessed Cellebrite's UFED Units, extracted and decrypted the Cellebrite BlackBerry Bootloader and the Physical Extraction Payload whereby MS AB reverse engineered, copied, and integrated the Cellebrite BlackBerry Bootloader (including the Stack Changer) and Physical Extraction Payload into MS AB's Infringing Samsung Solution.

171. MS AB unlawfully accessed, extracted, and decrypted Cellebrite's Unsigned Bootloader and Physical Extraction Payload, and then reverse engineered, copied, and integrated Cellebrite's Unsigned Bootloader and the Physical Extraction Payload into MS AB's MS AB's Infringing BlackBerry Solution.

172. As further set forth above, there exists a substantial and striking similarity between Cellebrite's Unsigned Bootloader and the Physical Extraction Payload protected by the Cellebrite BB Copyrights and MS AB's Infringing BlackBerry Solution.

173. Once MS AB copied and integrated Cellebrite's Unsigned Bootloader and the Physical Extraction Payload into MS AB's Infringing BlackBerry Solution, MS AB imported into the U.S., distributed, sold and continues to import, distribute, and sell such infringing products in the U.S.

174. MS AB has violated Cellebrite's exclusive rights under the U.S. Copyright Act to reproduce the copyrighted portions of Cellebrite's BlackBerry Unsigned Bootloader and the Physical Extraction Payload, prepare derivative works based on the copyrighted work, and to import into the U.S. and distribute copies of the copyrighted software to the public.

175. MS AB had actual or constructive knowledge that its acts constituted copyright infringement.

176. MS AB's infringement was willful and deliberate, and its conduct was intentional and undertaken with full knowledge, and with indifference to Cellebrite's rights.

177. Cellebrite has been damaged as a result of MS AB's infringement, and continues to be damaged by MS AB's conduct.

178. MS AB will continue its acts of copyright infringement and Cellebrite will continue to be injured as a result of such infringement unless enjoined by the Court.

179. Cellebrite has no adequate remedy at law to compensate Cellebrite for the damage suffered from MS AB's infringement.

180. Cellebrite reserves the right, pursuant to 17 U.S.C. § 504(c) to elect to recover statutory damages for each infringement by MS AB, in lieu of seeking recovery of actual

damages. As MS AB's infringement was intentional and willful, Cellebrite is entitled to an award of increased statutory damages under 17 U.S.C. § 504(c)(2).

181. Cellebrite is also entitled to recover full costs and reasonable attorney's fees pursuant to 17 U.S.C. § 505.

**Count IV—Against MSAB, Inc.**  
**(Copyright Infringement by MSAB, Inc. of (BB) Boot Loader Copyright and**  
**(BB) Stack Changer Copyright: in Violation of**  
**Section 501(a) and Section 106(3) of the U.S. Copyright Act)**

182. Plaintiffs incorporate herein Paragraphs 1-181 above.

183. Without Cellebrite's authorization, MSAB, Inc. currently imports into the U.S., distributes, markets, and sells MS AB's Infringing BlackBerry Solution containing Cellebrite's Unsigned Bootloader and the Physical Extraction Payload via online downloads and by shipment of compact discs and flash memory devices from MS AB, Inc.'s offices in Alexandria, Virginia to customers in Virginia and throughout the United States.

184. MSAB, Inc. has violated Cellebrite's exclusive rights in the Cellebrite BB Copyrights under the U.S. Copyright Act by distributing Cellebrite's copyrighted works to the public by sale or other transfer of ownership, or by rental, lease, or lending.

185. MSAB, Inc. has also violated Cellebrite's exclusive rights under the U.S. Copyright Act by importing Cellebrite's copyrighted works into the United States without authorization from Cellebrite.

186. MSAB, Inc. had actual or constructive knowledge that its acts constituted copyright infringement.

187. MSAB, Inc.'s infringement was willful and deliberate, and its conduct was intentional and undertaken with full knowledge, and with indifference to Cellebrite's rights.

188. Cellebrite has been damaged as a result of MSAB Inc.'s infringement, and continues to be damaged by MSAB Inc.'s conduct.

189. MSAB, Inc. will continue its acts of copyright infringement and Cellebrite will continue to be injured as a result of such infringement unless enjoined by the Court.

190. Cellebrite has no adequate remedy at law to compensate Cellebrite for the damage suffered from MSAB, Inc.'s infringement.

191. Cellebrite reserves the right, pursuant to 17 U.S.C. § 504(c) to elect to recover statutory damages for each infringement by MSAB, Inc., in lieu of seeking recovery of actual damages. As MSAB Inc.'s infringement was intentional and willful, Cellebrite is entitled to an award of increased statutory damages under 17 U.S.C. § 504(c)(2).

192. Cellebrite is also entitled to recover full costs and reasonable attorneys' fees pursuant to 17 U.S.C. § 505.

**Count V—Against MS AB**

**(Contributory Copyright Infringement by MS AB of Cellebrite Samsung Bootloader Copyright, (BB) Boot Loader Copyright, and (BB) Stack Changer Copyright)**

193. Plaintiffs incorporate herein Paragraphs 1-192 above.

194. As further set forth above, MSAB, Inc. directly infringes the Cellebrite Samsung Bootloader Copyright, the (BB) Boot Loader Copyright, and the (BB) Stack Changer Copyright by importing into the U.S. and distributing MS AB's Infringing Samsung Solution and MS AB's Infringing BlackBerry Solution.

195. MS AB's Infringing Samsung Solution and MS AB's Infringing BlackBerry Solution were unlawfully made.

196. MS AB enlisted MSAB, Inc. in the process of marketing, sales, and distribution of products containing Cellebrite's copyrighted software.

197. MS AB intentionally encouraged and contributed to MSAB, Inc.'s infringement.

198. MS AB affirmatively authorized, induced, and acted in concert with MSAB, Inc. to make sales of the infringing products in the United States.

199. MS AB delivers inventories of its infringing products to MSAB, Inc. in the U.S. and receives payment for such products.

200. MS AB's Infringing Samsung Solution and MS AB's Infringing BlackBerry Solution are not capable of non-infringing uses.

201. As a direct and proximate cause of MS AB's contributory infringement, Cellebrite has been and continues to be damaged.

202. MS AB's contributory infringement was willful and deliberate, and its conduct was intentional and undertaken with full knowledge, and with indifference to Cellebrite's rights.

203. MS AB will continue its acts of contributory copyright infringement and Cellebrite will continue to be injured as a result of such infringement unless enjoined by the Court.

204. Cellebrite has no adequate remedy at law to compensate it for the damage suffered from MS AB's contributory infringement.

**Count VI -- Against Both Defendants**  
**(Misappropriation by Defendants of Cellebrite's Trade Secrets in Violation of the**  
**Virginia Uniform Trade Secrets Act)**

205. Plaintiffs incorporate herein Paragraphs 1-204 above.

206. Cellebrite's Trade Secrets, including without limitation the Cellebrite Samsung Bootloader, Cellebrite's Samsung Solution, Cellebrite's Unsigned Bootloader, the Physical Extraction Payload, Cellebrite's BlackBerry Solution, and Cellebrite's formulas, patterns, compilations, programs, devices, methods, techniques, and processes are trade secrets within the meaning of the Virginia Uniform Trade Secrets Act ("**VUTSA**"), Va. Code § 59.1-336

207. Cellebrite's Trade Secrets have independent economic value because they are not generally known and are not readily ascertainable by proper means by persons who could obtain economic value or benefit from disclosure or use thereof. Cellebrite's Trade Secrets provide Cellebrite a competitive advantage in the industry of data extraction from mobile devices.

208. Cellebrite's Samsung Solution and Cellebrite's BlackBerry Solution are cutting edge, innovative solutions, which involved thousands of hours of research and development and significant financial and other investments for development by Cellebrite's software engineers, thereby providing Cellebrite with a significant competitive advantage.

209. There is great demand for the rapid development of cutting edge solutions that expose vulnerabilities in the latest state-of-the-art mobile devices in order to ensure that law enforcement agencies have the latest tools to use in fighting criminals who have access to the newest mobile technology.

210. Cellebrite is known for its very fast time to market for these solutions for law enforcement, and even in copying Cellebrite's solutions, MS AB lagged behind Cellebrite by

over one year in delivering the MS AB Infringing Samsung Solution, and lagged behind Cellebrite by almost a year in delivering the MS AB Infringing BlackBerry Solution.

211. Cellebrite's Trade Secrets are not generally known to members within the relevant industry, and are not ascertainable through proper means.

212. Cellebrite's Trade Secrets have been the subject of intensive efforts by Cellebrite to maintain its secrecy. In fact, Cellebrite takes considerable precautions to protect the Cellebrite Trade Secrets and assure the protection of confidentiality and secrecy, including without limitation, restricting access to information, requiring employee confidentiality agreements and NDA's with third parties, employing heavily restricted access to code and encryption of code, restricting access to Cellebrite's servers, employing network security features, password protection measures, and physical security measures and barriers to access to its premises.

213. Cellebrite consistently treats the Cellebrite Trade Secrets as trade secrets, including by blocking out trade secrets in its source code filed in its copyright applications for the Cellebrite Samsung Bootloader Copyright and the Cellebrite BB Copyrights in accordance with the U.S. Copyright Office's instructions regarding source code containing trade secrets in U.S. Copyright Office Circular 61 regarding computer program copyright applications.

214. Additionally, Cellebrite uses complex encryption methods to encrypt all software residing on its products, requiring any unauthorized person – such as Defendants – to devote enormous time and efforts to decrypt such code before reverse engineering, copying, modifying, and integrating Cellebrite's Trade Secrets into infringing products.

215. The express language in Cellebrite's EULA reaffirms the confidential and proprietary nature of Cellebrite's Trade Secrets.

216. Because of the inaccessible nature of Cellebrite's Intellectual Property, its disclosure and use without intensive unlawful efforts is virtually impossible.

217. Defendants have misappropriated Cellebrite's Trade Secrets by both acquiring them by improper means pursuant to § 59.1-336(1) and using such trade secrets in its products without Cellebrite's consent pursuant to § 59.1(2)(a) and (2)(b)(1) and (2).

218. Defendants have misappropriated Cellebrite's trade secrets by knowingly acquiring them through improper means, including upon information and belief, through theft, misrepresentation, and other unlawful means, and using Cellebrite's Trade Secrets without Cellebrite's consent.

219. Upon information and belief, MS AB in concert and collaboration with MSAB, Inc. in Virginia, wrongfully acquired one or more of Cellebrite's UFED Units in furtherance of Defendants' unlawful scheme to hack into, extract, decrypt, and reverse engineer, study, and copy Cellebrite's proprietary code, methods, techniques, strategies, algorithms, and other Trade Secrets for the purpose of integrating such trade secrets into MS AB's competing products that are sold in the U.S. by MS AB and MSAB, Inc. in direct competition with Cellebrite's UFED Units.

220. Upon information and belief MS AB and MSAB, Inc. have continually communicated over computer networks, servers, and e-mail servers stationed in Virginia regarding the unlawful acquisition and use of the Cellebrite Trade Secrets, and have accessed, sent, copied, and stored files containing Cellebrite's Trade Secrets on such computer networks and servers in Virginia.

221. Defendants have misappropriated Cellebrite's Trade Secrets subsisting in the Cellebrite Samsung Solution, including without limitation the Cellebrite Samsung Bootloader,



methods, strategies, algorithms, and tactics for accessing the Samsung phone RAM, utilizing identical Loading Addresses on the Samsung phone RAM, injecting boot loader software, and extracting data from Samsung mobile devices – thereby misappropriating the core technology of the Cellebrite Samsung Solution.

222. Defendants have similarly misappropriated Cellebrite's Trade Secrets subsisting in the Cellebrite BlackBerry Solution, including without limitation the Cellebrite's Unsigned Bootloader and Physical Extraction Payload, the Stack Changer, as well as methods, strategies, algorithms, and tactics for using the April 2011 version of the BlackBerry Signed Bootloader to bypass the BlackBerry mobile device's security protections in order to run an unsigned bootloader on the BlackBerry phone's RAM, and extracting data from BlackBerry mobile devices.

223. Cellebrite's Trade Secrets form an integral and substantial part of the technology in MS AB's XRY software such that absent the misappropriated Cellebrite Trade Secrets, Defendants would have been unable to independently to develop a comparable product. In fact, Defendants' entire software solution for the extraction of data for the Samsung and BlackBerry mobile devices has been built upon the misappropriated Cellebrite Trade Secrets.

224. MS AB has used Cellebrite's Trade Secrets, without its consent, by integrating and incorporating them into their own products, shipping such products to MSAB, Inc. in Virginia for distribution, selling such products via online downloads through its website into the U.S., and providing sales and warranty support in the U.S. in connection with the infringing products.

225. MSAB, Inc. imports, distributes, and sells MS AB's infringing XRY products which copy and integrate Cellebrite's Trade Secrets, throughout the U.S. from Virginia.

226. MSAB, Inc. also provides customer service support, technical support, customer training by its technology specialists, and product information and literature, among other services in connection with products containing Cellebrite's Trade Secrets.

227. MSAB, Inc. and MS AB knew or had reason to know that MS AB's infringing products incorporate Cellebrite Trade Secrets which were acquired by improper means.

228. Cellebrite has suffered and will continue to suffer actual losses as a result of Defendants' misappropriation of Cellebrite's trade secrets as Defendants have been selling and wrongfully deriving profit from competing products which integrate the Cellebrite Trade Secrets.

229. In addition, Defendants have been, and will continue to be, unjustly enriched in that Cellebrite has expended significant time and expenses in developing its Trade Secrets.

230. Defendants' conduct in effecting the misappropriation was extensive and egregious. Defendants' misappropriation was willful and malicious, thus entitling Cellebrite to punitive damages pursuant to Va. Code § 59.1-338(B) and attorneys' fees pursuant to Va. Code § 59.1-338.1.

231. Defendants' activities constitute a continuing threat of misappropriation. Therefore, absent an injunction, Defendants would be using Cellebrite's Trade Secrets to Cellebrite's competitive disadvantage. Cellebrite is thus entitled to injunctive relief under Va. Code. § 59.1-337 enjoining Defendants' misappropriation.

**Count VII – Against Both Defendants**  
**(Trademark Infringement of the Cellebrite Trademark:**  
**in Violation of Section 32 of the Lanham Act, 15 U.S.C. §1114)**

232. Plaintiffs incorporate herein Paragraphs 1- 231 above.

233. Cellebrite USA is the registered owner of the Cellebrite Trademark -- Reg. No. 3,678,338, as well as the UFED Trademark.

234. MS AB and/or MSAB, Inc. purchase of a trademarked keyword to trigger sponsored links in Google AdWords constitutes “use” within the meaning of the Lanham Act.

235. The purchase of the keyword, “Cellebrite” was a commercial transaction that occurred in commerce, trading on the value of Cellebrite USA’s Cellebrite Trademark.

236. Defendants’ use of the Cellebrite Trademark is both “in commerce” and “in connection with goods and services” in that Cellebrite USA’s mark was used to trigger commercial advertising, which included a link to Defendants’ website.

237. Defendants’ use of the Cellebrite Trademarks is likely to cause initial interest confusion by seeking to divert and misdirect internet users to their own competing website.

238. Defendants used the Cellebrite Trademark in a manner calculated to capture initial consumer attention with the intention of free riding on Cellebrite USA’s good reputation and goodwill in the U.S.

239. Defendants’ actions are reaping the benefits of consumer confusion with consumers being routed to Defendants’ website.

240. By using the Cellebrite Trademark to divert customers and potential customers looking for information about Cellebrite’s products to MS AB’s website, Defendants improperly benefitted from the goodwill that Cellebrite USA developed in the Cellebrite Trademark.

241. Defendants intentionally chose the Cellebrite Trademark based on its strength and appeal in the market.

242. Defendants have engaged in trademark infringement in violation of 15 U.S.C. § 1114 by using the Cellebrite Trademark without Cellebrite USA’s consent in connection with the advertising of Defendants’ goods and services which is likely to cause confusion or mistake, or to deceive.

243. Defendants had actual or constructive knowledge that its acts constituted trademark infringement.

244. Defendants' infringement was willful and deliberate, and its conduct was intentional and undertaken with full knowledge and purpose, and with indifference to Cellebrite USA's rights.

245. Cellebrite USA has been damaged as a result of Defendants' actions, and continues to be damaged by their conduct.

246. Defendants will continue their acts of trademark infringement and Cellebrite USA will continue to be injured as a result of such infringement unless enjoined by the Court.

247. Cellebrite USA has no adequate remedy at law to compensate it for the damage suffered from Defendants' violations.

248. Cellebrite USA is entitled to Defendants' profits, damages sustained by Cellebrite USA, treble damages, reasonable attorneys' fees, all costs of this action, and any other sums as the Court finds to be just compensation to Cellebrite USA pursuant to 15 U.S.C. § 1117.

249. Cellebrite USA is also entitled to injunctive relief under 15 U.S.C. § 1116 upon such terms as the Court deems reasonable to prevent the violation of any right of Cellebrite USA with respect to the Cellebrite Trademark.

**Count VIII –Against Both Defendants**

**(Unfair Competition in Violation of Section 43 of the Lanham Act, 15 U.S.C. § 1125(a))**

250. Plaintiffs incorporate herein Paragraphs 1-249 above.

251. MS AB and/or MSAB, Inc. have purchased as keywords for the Google AdWords program, the terms "Cellebrite," "UFED," "UFED system," and, upon information and belief, other marks, names, words, and terms of Cellebrite.

252. Defendants' purchase of the Cellebrite Trademark and other marks, names, words, and terms of the Plaintiffs as keywords to trigger sponsored links constitutes "use" within the meaning of the Lanham Act and was a commercial transaction that occurred in commerce, trading on the value of Plaintiffs' marks, names, words, and terms.

253. Defendants' use of Plaintiffs' marks, names, words, and terms was both "in commerce" and "in connection with goods and services" in that the marks, names, words, and terms of Plaintiffs were used to trigger commercial advertising which included a link to Defendants' website.

254. Defendants' use of Plaintiffs' marks, names, words, and terms is likely to cause initial interest confusion by seeking to divert and misdirect Internet users, customers and potential customers to Defendants' own competing website.

255. Defendants used Plaintiffs' marks, names, words, and terms in a manner calculated to capture initial consumer attention, and free ride on the good reputation and good will of Plaintiffs.

256. Defendants' actions are reaping the benefits of consumer confusion with consumers being routed to Defendants' website.

257. By using Plaintiffs' marks, names, words, and terms to divert customers and potential customers looking for Plaintiffs' products to Defendants' website, Defendants improperly benefit from the goodwill that Plaintiffs developed in its marks, names, words, and terms.

258. Defendants intentionally chose Plaintiffs' marks, words, names, and terms based on their strength and appeal in the market.

259. Defendants have engaged in unfair competition in violation of 15 U.S.C. § 1125(a) by using Cellebrite's marks, words, names, and terms in connection with Defendants' goods and services, which use is likely to cause confusion or mistake, or to deceive as to the affiliation, connection, or association of Defendants and Plaintiffs, or as to origin, sponsorship, or approval of Defendants' goods, services, or commercial activities by Plaintiffs.

260. Defendants' activities were willful and deliberate, and their conduct was intentional and undertaken with full knowledge and purpose, and with indifference to Plaintiffs' rights.

261. Plaintiffs have been damaged as a result of Defendants' actions, and continue to be damaged by their conduct.

262. Defendants will continue its acts of unfair competition and Plaintiffs will continue to be injured as a result of such unfair competition unless enjoined by the Court.

263. Plaintiffs have no adequate remedy at law to compensate it for the damage suffered from Defendants' violations.

264. Plaintiffs are entitled to Defendants' profits, damages sustained by Plaintiffs, treble damages, reasonable attorneys' fees, all costs of this action, and any other sums as the Court finds to be just compensation to Plaintiffs pursuant to 15 U.S.C. § 1117.

265. Plaintiffs are also entitled to injunctive relief under 15 U.S.C. § 1116 upon such terms as the Court deems reasonable to prevent the violation of rights of Plaintiffs and unfair competition of Defendants.

**Count IX – Against Both Defendants**  
**(Breach of Contract -- Cellebrite's End User License Agreement)**

266. Plaintiffs incorporate herein Paragraphs 1-265 above.

267. Cellebrite's EULA is a valid license agreement, legally binding upon any person who installs and uses Cellebrite's UFED Software (as defined in the EULA).

268. In undertaking their plan and scheme to willfully misappropriate Cellebrite's Trade Secrets, Defendants have installed and used the UFED Software, accepted the terms of the EULA, and became contractually bound by its terms.

269. Defendants have willfully breached and continue to breach the terms and conditions of the EULA, including the restrictions on the use of the UFED Software above. Namely, Defendants have copied, altered, translated, decompiled, derived the source code, modified, reverse engineered the UFED Software, circumventing security measures, and have integrated Cellebrite's code in its competing products. Furthermore, Defendants have distributed and sold the infringing products containing the UFED Software in contravention of the EULA.

270. As a direct and proximate result of Defendants' breach of contract, Cellebrite has been and continues to be damaged.

**WHEREFORE**, Plaintiffs respectfully demand the entry of judgment against the Defendants as follows:

A. On Counts I, III, and V for Copyright Infringement and Contributory Copyright Infringement against MS AB, judgment against MS AB that it has willfully infringed the Cellebrite Samsung Bootloader Copyright, the BB Bootloader Copyright and the BB Stack Changer Copyright, an award of actual damages or statutory damages pursuant to 17 U.S.C. § 504(c), an award of increased statutory damages under 17 U.S.C. § 504(c)(2), an order pursuant to 17 U.S.C. § 503 impounding and disposing of all infringing articles and taking into the custody of the Court all records documenting the manufacture, sale, or receipt of all things involved in MS AB's violation of the exclusive rights of Cellebrite; a temporary and permanent injunction under 17 U.S.C. § 502 to prevent and restrain MS AB's infringement, and recovery of full costs and reasonable attorneys' fees pursuant to 17 U.S.C. § 505.

B. On Count II and IV for Copyright Infringement against MSAB, Inc. judgment against MSAB, Inc. that it has willfully infringed the Cellebrite Samsung Bootloader Copyright, the BB Bootloader Copyright and the BB Stack Changer Copyright, an award of actual damages or statutory damages pursuant to 17 U.S.C. § 504(c), an award of increased statutory damages under 17 U.S.C. § 504(c)(2), an order pursuant to 17 U.S.C. § 503 impounding and disposing of all infringing articles and taking into the custody of the Court all records documenting the manufacture, sale, or receipt of all things involved in MSAB Inc.'s violation of the exclusive rights of Cellebrite; a temporary and permanent injunction under 17 U.S.C. § 502 to prevent or restrain MSAB Inc.'s infringement, and recovery of full costs and reasonable attorneys' fees pursuant to 17 U.S.C. § 505.



C. On Count VI for Misappropriation of Trade Secrets against MS AB and MSAB, Inc., judgment, jointly and severally, that MS AB and MSAB, Inc. have willfully misappropriated Cellebrite's trade secrets; an award of actual damages caused by Defendants' misappropriation and the unjust enrichment caused by such misappropriation or a reasonable royalty for unauthorized use of Cellebrite's Trade Secrets; punitive damages pursuant to Va. Code § 59.1-338(B); attorneys' fees pursuant to Va. Code § 59.1-338.1; and injunctive relief under Va. Code. § 59.1-337 enjoining Defendants' continued misappropriation.

D. On Counts VII and VIII for Trademark Infringement and Unfair Competition by Defendants in violation of the Lanham Act, judgment against Defendants, jointly and severally, that Defendants have willfully infringed the Cellebrite Trademark in violation of 15 U.S.C. § 1114 and have unfairly competed with Plaintiffs; disgorgement of Defendants' profits, and an award of damages sustained by Cellebrite USA, treble damages, reasonable attorneys' fees, all costs of this action, and any other sums as the Court finds to be just compensation to Cellebrite USA pursuant to 15 U.S.C. § 1117; and an injunction under 15 U.S.C. § 1116 upon such terms as the Court deems reasonable to prevent the violation of any right of Cellebrite USA with respect to the Cellebrite marks.

E. On Count IX for Breach of Contract, judgment against Defendants, jointly and severally, for damages in an amount to be determined at trial.

F. An order that Defendants pay punitive damages in an amount to be determined by the Court.

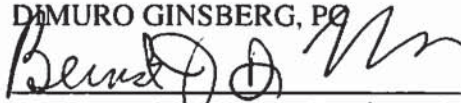
G. An award to Plaintiffs of all costs, litigation expenses (including fees and costs of expert witnesses), disbursements, and attorneys' fees incurred by the Plaintiffs in this action.

H. An award to Plaintiffs of any other or further relief as the Court deems just and proper.

Dated: Alexandria, Virginia  
August 16, 2013

Respectfully submitted,

DIMURO GINSBERG, PC



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