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10	Transfer Gioria IX. Tark					
11	LINUTED STATES DISTRICT COLUDT					
12	UNITED STATES DISTRICT COURT					
13	NORTHERN DISTRICT					
14	SAN JOSE DIVISION					
15	GLORIA K. PARK, an Individual, on behalf of	Case No.				
16	herself and all others similarly situated,					
17	Plaintiff,	CLASS ACTION COMPLAINT				
18	vs.	FOR DAMAGES AND				
19	INTEL CORPORATION, a Delaware Corporation	EQUITABLE RELIEF				
	with principal place of business in California,					
20	D.C. I	JURY TRIAL DEMANDED				
21	Defendant.					
22						
23						
24	Plaintiff Gloria K. Park, on behalf of herself and all others similarly situated, by and					
25	through undersigned counsel, brings this class action for damages and equitable relief against					
	Defendant Intel Corporation. Plaintiff alleges the fo	llowing upon information and belief based				
26	on the investigation of counsel, except as to those all					
27		and appearment, permit to Figure				
28	which are alleged upon personal knowledge:					
	1					
	CLASS ACTION COMPLAINT FOR DAMAGES AND EQUITABLE RELIEF					

#### NATURE OF THE ACTION

- 1. This is a civil action brought by Plaintiff Gloria K. Park ("Plaintiff") on behalf of herself and all others similarly situated against Defendant Intel Corporation ("Intel" or "Defendant").
- 2. Intel is a technology company that manufactures the microprocessors found in most personal computers. It has been the dominant force in the market since bringing out, in 1971, the Intel 4004, the first commercial chip-based central processing unit ("CPU"). In 1974, Intel produced the Intel 8080 CPU, which was used in the MIT Altair 8080, the world's first successful personal computer. In 1979, Intel brought out the 8088 and 8086 CPUs, which began the lines of x86 CPUs that, in successive generations, continue to be marketed today, and that currently power most Windows, Linux, and Apple OS personal computers. <sup>1</sup>
- 3. As lately revealed, the Intel x86 CPUs in the personal computers of Plaintiff and members of the Class (defined below) contain serious bugs making the computers susceptible to hackers ("x86 CPUs" or "Defective CPUs"). Named "Meltdown" and "Spectre," these bugs are flaws in Intel x86 CPUs that allow malicious code to use "speculative processing" side-channel attacks to circumvent the memory isolation normally present between applications, enabling hackers to copy data used by legitimate applications and steal sensitive personal and financial information such as social security numbers, encryption keys, and account and password information. Software patches are ineffective or problematic and significantly impair performance, decreasing effective computing power by up to 30 per cent. Intel has failed to offer a true fix, such as simply replacing the Defective CPUs.
- 4. The Meltdown and Spectre bugs are not just present on one or a few Intel CPUs but were copied by Intel from one generation of CPUs to the next and incorporated into each new generation's series of x86 processors. The bugs affect virtually all Intel CPUs used in personal computers during the past 10 years. Making the situation even worse, Intel knew about the bugs for at least some six months before it disclosed their existence to at-risk owners of affected computers, and may have known of the bugs even longer. Intel also ignored industry

<sup>&</sup>lt;sup>1</sup> Herein, "personal computer" means a desktop, laptop, notebook, or tablet computer based on a single-chip CPU, regardless of whether it is used for personal or business use.

studies warning of Meltdown- and Spectre-like vulnerabilities in its chips as early as 1995, and instead spent hundreds of millions of dollars falsely advertising to consumers that its x86 CPUs, and the computers using them, were superior, safe, and secure.

5. Accordingly, Plaintiff brings this case and asserts claims on behalf of herself and a Class of similarly-situated consumers (defined below) for violations of the Song-Beverly Consumer Warranty Act, Cal. Civ. Code § 1791, *et seq.*, Magnuson-Moss Warranty Act, 15 U.S.C. §2301, *et seq.*, California Consumer Legal Remedies Act, Cal. Civil Code § 1750, *et seq.* and Unfair Competition Law, Bus. & Prof. C. §17200 *et seq.*,; and for negligence, negligent misrepresentation, strict liability for product defect, breach of implied and express warranties, and unjust enrichment.

#### **JURISDICTION AND VENUE**

- 6. This Court has subject matter jurisdiction pursuant to the Class Action Fairness Act, 28 U.S.C. § 1332(d), because the aggregate amount in controversy exceeds \$5 million, exclusive of interests and costs; the number of members of the proposed Class exceeds 100; and many members of the proposed Class are citizens of different states than the Defendant.
- 7. This Court has personal jurisdiction over the Defendant as it has its headquarters in this State and in this Judicial District and/or the conduct complained of occurred in and/or emanated from this State and Judicial District.
- 8. Venue is proper in this Judicial District because Defendant resides in this Judicial District and/or the conduct complained of occurred in or emanated from this District.

### INTRADISTRICT ASSIGNMENT

9. Venue is proper in this Judicial District and the San Jose division thereof pursuant to 28 U.S.C. section 1391 subsections (b) and (c), and Civil L.R. 3-2 subsections (c) and (e). Defendant resides in Santa Clara County within such division, and Defendant transacts business in this division and County and/or a substantial part of the events giving rise to the claims at issue in the litigation arose in this division and County.

#### **PARTIES**

10. Defendant Intel Corporation ("Intel") is an American multinational technology company. It is a Delaware corporation with headquarters in Santa Clara, California. Intel is

publicly-traded (NASDAQ: INTC), and has a market cap of \$215 billion. With branches and operations in numerous states and countries, it has more than 106,000 employees. In 2016, its revenues were \$59.4 billion.

- 11. Defendant Intel is the world's foremost maker of CPUs used in personal computers. Its microprocessors power most Windows, Linux, and Apple OS personal computers, including the personal computers owned by Plaintiff and Class members.
- 12. Defendant Intel manufactured CPUs with the Meltdown and Spectre bugs that it supplied to manufacturers for incorporation into the personal computers purchased by Plaintiff and Class members.
- 13. Plaintiff Gloria K. Park ("Plaintiff") is and has at all relevant times been a resident of California. Plaintiff purchased and is the owner and user of personal computers containing x86 CPUs with the Meltdown and Spectre bugs, including a Samsung Series 3 personal computer and a Dell OptiPlex 9010 personal computer.

#### **TOLLING OF STATUTES OF LIMITATION**

14. Any applicable statutes of limitation are tolled because, while Defendant began supplying Defective CPUs with the dangerous Meltdown and Spectre CPU bugs as early as 1995, and copied such bugs into subsequent generations of Intel CPUs, Defendant failed to disclose and/or concealed the existence of such bugs until in January 2018. Plaintiff and class members had no knowledge of the Meltdown and Spectre CPU bugs complained of herein which unbeknownst to them were present in their personal computers' Defective CPUs, and had no way of gaining such knowledge, until news of the bugs was released in January 2018.

# SUBSTANTIVE ALLEGATIONS COMMON TO ALL CAUSES OF ACTION Intel Corporation – Foremost Maker of CPUs for Personal Computers

15. Intel Corporation<sup>2</sup> is headquartered in Santa Clara, California, in heart of the Silicon Valley. Intel was founded in 1968 by Robert Noyce, a key inventor of the integrated

<sup>&</sup>lt;sup>2</sup> Intel's name is taken from and is an amalgam of the words "integrated" and "electronics."

circuit, and Gordon Moore, after which Moore's Law is named.<sup>3</sup> Intel was a pioneer in developing semiconductor chips incorporating large scale integration, and a developer of SRAM and DRAM memory chips, which represented the majority of its business until approximately 1981, when CPUs became Intel's predominant product.

- 16. Intel produced the world's first commercial CPU, the 4-bit Intel 4004, in 1971. In 1974, it brought out the Intel 8080 8-bit CPU, on which was based the world's first successful commercially-produced personal computer--the MITS Altair 8080. The Altair 8080, which established the S-100 bus standard, launched the microcomputer revolution.
- 17. The 8-bit Intel 8080 was followed in 1979 by the hybrid 8/16-bit Intel 8088,<sup>4</sup> on which the original IBM PC was based. The contemporaneous 16-bit Intel 8086 gave rise to the x86 series of 16-, 32- and 64-bit CPUs (80286, 80386, 80486, Pentium, etc.) that established and continued Intel's domination of the market in the face of competition from other CPU makers, including Zilog, Motorola and AMD (Advanced Micro Devices).



Intel® and Core<sup>TM</sup> are trademarks of Intel Corporation.

18. Intel CPUs, including the Defective CPUs, are dense integrated circuits or "chips" that are generally installed in a socket on the personal computer's motherboard. While in a sense

<sup>&</sup>lt;sup>3</sup> Moore's Law is not a natural law but an observation that the number of transistors in a dense integrated circuit doubles approximately every two years. Actually, Gordon Moore, who gave his name to this "law," originally stated in a 1965 paper that the doubling occurred every year. In 1975, he revised it to a doubling of components every two years. His "law" has proved largely accurate, but with some evidence of a slowdown in rate of achievable chip density. In 2015, Intel CEO Brian Krzanich stated, "Our cadence today is closer to two and a half years than two."

<sup>&</sup>lt;sup>4</sup> The Intel 8088 CPU had an 8-bit data bus and a 16-bit address bus.

the heart of the computer, the CPU is typically removable; and computer owners, particularly hobbyists or gamers, sometimes upgrade their computer's CPU to a compatible CPU that is faster and more capable. *See* Loyd Case, *Upgrade your CPU*, PCWorld, June 6, 2011, *found at* https://www.pcworld.com/article/230834/upgrade\_your\_cpu.html (last visited Jan. 25, 2018).

19. Intel is today the world's foremost maker of CPUs used in personal computers. Intel's x86 series of microprocessors power most Windows, Linux and Apple OS personal computers. Intel supplies CPUs for personal and business computer systems manufactured by many different companies, including Apple, Asus, Dell, HP, Lenovo and Samsung. Intel is also the world's second largest semiconductor manufacturer, and in addition to CPUs manufactures many other integrated circuits, controllers and chipsets, including motherboard chipsets, network interface controllers, memory chips, graphics chips, embedded processors and other devices related to networking and computing.

### **The Marketing of CPU/Computer Speed**

20. From the beginning of the microcomputer revolution, speed has been an important factor in comparing CPUs and computers, measured both by clock frequency and by the other characteristics of chip architecture that determine the effective speed at which the CPU can perform memory and other operations and carry out machine code instructions.





Intel Inside  $^{\mathrm{TM}}$  is the trademark of Intel Corporation.

21. In each generation, Intel has offered multiple CPUs, with different advertised speed and other ratings. Intel today markets the i3, i5, and i7 lines of x86 CPUs for personal computers,<sup>5</sup> with the numbers representing the comparative performance rating of those lines of chips of that generation rather than specific CPUs. The CPUs' relative levels of processing power depend on criteria including number of cores/threads, clock speed (in GHz), size of cache, and technologies like Turbo Boost and Hyper-Threading. Each generation of the i3/i5/i7 has lineups

<sup>&</sup>lt;sup>5</sup> Intel also produces other CPUs in addition to its x86 lines of CPUs.

of CPUs with specific cores/threads specifications, and speed and performance ratings. For example, Intel's latest 8<sup>th</sup> generation i5 chip encompasses at least four different CPUs, including the i5-8250U, i5-8350U, i5-8400 and i5-8600K CPUs.

- 22. The technologies, speed and performance ratings of the CPU translate into speed and performance ratings for the personal computer containing the CPU. A faster and more capable CPU will generally require the computer to have faster memory and more advanced circuitry, to take advantage of the CPU.
- 23. Manufacturers and consumers must pay higher prices for faster speed variants of Intel's i3, i5 and i7 chips. For example, the 8<sup>th</sup> generation i3-8100 runs at a base frequency of 3.6 Ghz and sells for \$117, while the i3-8350K, which has the same cores/threads specifications, runs at a base frequency of 4.0 Ghz and sells for \$168. Similarly, computers containing faster CPUs command higher prices.
- 24. Different models of personal computers are advertised in large part according to the CPUs they are based on. Consumers are willing to pay higher prices for computers with faster CPUs, since those machines will be better able to handle complex software efficiently and without slowdowns. Various benchmark programs exist that can be used to measure the effective speed of CPUs and their incorporating personal computers.

# Intel CPUs Found in Most Personal Computers Contain "Worst Ever CPU Bugs," Exposing Unsuspecting Consumers' Computers and Their Sensitive Personal and Financial Information to Hackers

25. As discovered by researchers at Google's Project Zero, virtually all Intel CPUs manufactured within the past 10 years contain two very serious security flaws that allow hackers easy access to computers utilizing these CPUs. The flaws, named Meltdown and Spectre, are present in the CPUs of most personal computers running the Windows, Apple OS and Linux operation systems in use today, including those of Plaintiff and Class members.

The flaws, named Meltdown and Spectre, were discovered by security researchers at Google's Project Zero in conjunction with academic and industry researchers from several countries. Combined they affect virtually every modern computer, including smartphones, tablets and PCs from all vendors and running almost any operating system.

- --Meltdown and Spectre: 'worst ever' CPU bugs affect virtually all computers, The Guardian, found at https://www.theguardian.com/technology/2018/jan/04/meltdown-spectre-worst-cpu-bugs-ever-found-affect-computers-intel-processors-security-flaw (last visited Jan. 25, 2018).
- 26. The Meltdown and Spectre bugs are design flaws in Intel x86 CPUs that allow the bypassing of the memory isolation normally present between programs. The bugs allow malicious software infiltrated by hackers to access and steal data, such as encryption keys, account and password information, present in the memory being used by legitimate applications.
- 27. With the Meltdown bug, a design flaw in the interaction between the CPU's "speculative" or out-of-order code execution feature, its privilege check procedure, and its cache, allows rogue software mounting side-channel attacks to access another application's data that normally would be protected. A "CPU race condition" causes normally off-limits memory to be read in a detectable manner before the privilege check is completed to prevent the unauthorized access. As explained by Symantec, "If successfully exploited, an attacker can obtain a copy of the entire kernel address space, including any mapped physical memory, in other words, any data stored in memory at the time of the attack." *Meltdown and Spectre: Chip Vulnerabilities Could Facilitate Memory Leaks*, found at https://www.symantec.com/blogs/threat-intelligence/meltdown-spectre-cpu-bugs (last visited Jan. 24, 2018). Spectre produces a similar outcome but "works in a slightly different way, and exploits a flaw in processor design to trick an application into leaking information stored in memory." *Id*.
- 28. The Meltdown security flaw, affecting mainly Intel CPUs, is one of the worst bugs ever to affect a CPU. The Spectre bug is similar and may be even harder to patch and fix. Software patches for the operating system to plug the vulnerabilities caused by these bugs are ineffective or problematic, and reduce computer performance by 5 to 30 percent. In effect, even leaving aside the very real danger of breaches by hackers, this means that Plaintiff's and Class members' computers have suddenly had their power cut by up to one-third.

Meltdown is "probably one of the worst CPU bugs ever found", said Daniel Gruss, one of the researchers at Graz University of Technology who discovered the flaw.

Meltdown is currently thought to primarily affect Intel processors manufactured since 1995, excluding the company's Itanium server chips and Atom processors

Id.

Id.

before 2013. It could allow hackers to bypass the hardware barrier between applications run by users and the computer's core memory. Meltdown, therefore, requires a change to the way the operating system handles memory to fix, which initial speed estimates predict could affect the speed of the machine in certain tasks by as much as 30%.

The Spectre flaw affects most modern processors made by a variety of manufacturers, including Intel, AMD and those designed by ARM, and potentially allows hackers to trick otherwise error-free applications into giving up secret information. Spectre is harder for hackers to take advantage of but is also harder to fix and would be a bigger problem in the long term, according to Gruss.

29. Intel has known of the Meltdown and Spectre bugs since at least June or July 2017, and may have known much earlier, but it failed to disclose the bugs to owners of affected computers until the news broke publicly in early January. Even giving Intel the benefit of the doubt, Intel deliberately concealed its knowledge of the bugs, leaving Plaintiff's and Class members' computers and sensitive financial, health care, and other personal information at risk, for some six months:

Google said it informed the affected companies about the Spectre flaw on 1 June 2017 and later reported the Meltdown flaw before 28 July 2017. Both Intel and Google said they were planning to release details of the flaws on 9 January, when they said more fixes would be available, but that their hand had been forced after early reports led to Intel stock falling by 3.4% on Wednesday.

30. As reported by Wikipedia, "[t]he Meltdown and Spectre vulnerabilities are considered "catastrophic" by security analysts. The vulnerabilities are so severe that, initially, security researchers believed them to be false." *Meltdown (security vulnerability)*, Wikipedia, *found at* https://en.wikipedia.org/wiki/Meltdown\_(security\_vulnerability) (last visited Jan. 30, 2018) (citations omitted).

# <u>Intel Advertised And Promoted Computers Containing Its CPUs</u> <u>"Intel Inside" - A False Representation of Quality and Security</u>

31. During the some 10 years that Intel has incorporated the Meltdown and Spectre bugs into its x86 CPUs, Intel has actively promoted personal computers by manufacturers that use its x86 CPUs, and has falsely represented to consumers that these CPUs are of the highest

quality. It held itself out to the public, including Plaintiff and Class members as the maker of CPUs that excelled over those made by competitors such as AMD in terms of quality, safety, and security.

32. Intel's slogan "Intel Inside" appears on personal computers using Intel CPUs. The slogan has been an important marketing tool for Intel and the manufactures including Asus, Dell, HP, Lenovo, and Samsung whose personal computers used the Intel x86 CPUs.







Intel Inside<sup>TM</sup> is the trademark of Intel Corporation.

33. Since the '90s, Intel has invested hundreds of millions of dollars in convincing consumers that the "Intel Inside" sticker means quality and security. With consumers looking for guidance in how to differentiate one computer from another, given the technical complexities involved, Intel's authoritative advertising has been wildly successful. Consumers reasonably believed Intel's representations, and the "Intel Inside" program became one of history's most successful marketing campaigns.

If one thing distinguishes Intel's innovative thinking, it is their 1990s strategy of branding a semiconductor chip as a valuable feature that consumers would look for when they purchased a computer. The campaign's two decades of ubiquity make us forget this now, but at the time it was an incredibly novel approach to marketing. People bought computers because of the software, the specs, or a friend's recommendation. Who cared about who made some tiny chip inside the box that you couldn't even see?

But with the proliferation of PCs, and with consumers at a loss in trying to figure out what made one better than the other, Intel saw an opportunity, and so it took a major risk. Intel's leadership was convinced this was the way to grow market share, however, and the company invested hundreds of millions of dollars in the effort.

--Gary Shapiro, *The Marketing Backstory Of How Intel Became A Household Name, Fast Company, found at* https://www.fastcompany.com/3004135/marketing-backstory-how-intel-became-household-name (last visited Jan. 29, 2018).

34. Intel has at all relevant times advertised to consumers, including Plaintiff and Class members, the quality and security of computers containing the "Intel Inside" x86 CPUs. It emphasized the purported security and safety of Intel-based computers, making representations such as "Safe and Sound at Home...," "hardware-based security features help keep your system and data free from malware, hacking,, viruses, and prying eyes," "Get Peace of Mind." *See* https://www.intel.com/content/dam/www/public/us/en/documents/infographics/desktop-storylines-security-infographic.jpg.



### "Safe and Secure at Home with an Intel®-based Desktop

Enjoy amazing computing experiences and more control over personal content and information with an Intel® Core™ processor based desktop PC including hardware-based security features to keep systems free of hacking or viruses." © Intel Corporation. Intel® and Core™ are trademarks of Intel Corporation.

See id.

35. Unfortunately, the "Intel Inside" guaranty of quality, safety, and security—and the hundreds of millions of dollars in advertising promoting that message—was false. Incredibly, the Meltdown and Spectre bugs are not just present in one or a few Intel CPUs. In a staggering display of corporate carelessness, year after year, for more than 10 years, Intel copied these bugs from one generation of x86 CPUs to the next and incorporated them into each generation's series

of x86 processors.

36. Furthermore, industry studies and reports warned Intel of the possibility of Meltdown- and Spectre-like vulnerabilities in its chips as early as 1995. Intel ignored such warnings and instead of guarding against the inclusion of such bugs in its chips, chose to spend hundreds of millions of dollars on advertising that falsely touted (as it does today) the quality, safety, and security of computers containing its CPUs.

# <u>Patches are Ineffective and Impair Computer Performance, Leaving Class Members' Computers Vulnerable to Hackers</u>

37. Hackers either already take advantage of the security holes presented by Meltdown and Spectre to steal sensitive data or are developing software to do so, according to industry experts:

Google and the security researchers it worked with said it was not known whether hackers had already exploited Meltdown or Spectre and that detecting such intrusions would be very difficult as it would not leave any traces in log files.

Dan Guido, chief executive of cybersecurity consulting firm Trail of Bits, said that he expects hackers will quickly develop code they can use to launch attacks exploiting the vulnerabilities. He said: "Exploits for these bugs will be added to hackers' standard toolkits."

- --Meltdown and Spectre: "Worst Ever" CPU Bugs..., The Guardian, supra, found at https://www.theguardian.com/technology/2018/jan/04/meltdown-spectre-worst-cpu-bugs-ever-found-affect-computers-intel-processors-security-flaw (last visited Jan. 25, 2018).
- 38. German antivirus testing firm AV-Test has identified 139 samples of malware software that hackers are using to exploit the Meltdown and Spectre CPU bugs. *See* Liam Tung, *Meltdown-Spectre: Malware Is Already Being Tested By Attackers*, ZDNet, *found at* http://www.zdnet.com/article/meltdown-spectre-malware-is-already-being-tested-by-attackers/ (last visited Feb. 1, 2018).
- 39. To date, no truly effective software patches to any of the involved operating systems to address the Meltdown and Spectre bugs have been developed. The initial releases by Intel, Microsoft, and other developers have interacted with and cause problems with virus check programs and other third-party software and/or simply do not work. "Linux creator Linus

Torvalds criticized Intel's patches for the Linux kernel in a public message board on Sunday. 'All of this is pure garbage,' Torvalds wrote. 'The patches are COMPLETE AND UTTER GARBAGE. ... They do things that do not make sense.' (Emphasis his.)" *See* Lily Hay Newman, *Meltdown And Spectre Patching Has Been A Total Train Wreck*, Wired, Jan. 23, 2018, found at https://www.wired.com/story/meltdown-spectre-patching-total-train-wreck/ (last visited Jan. 30, 2018). Furthermore, the patches cause computers to suffer decreased performance of up to 30 percent.

- 40. Intel has released microcode updates for some of the affected CPUs, but they have been buggy and unsuccessful. "Microsoft has released an emergency Windows update to disable Intel's troublesome microcode fix for the Spectre Variant 2 attack. Not only was Intel's fix for the Spectre attack causing reboots and stability issues, but Microsoft also found it resulted in the worse scenario of data loss or corruption in some circumstances." Liam Tung, Windows Emergency Patch: Microsoft's New Update Kills Off Intel's Spectre Fix, ZDNet, Jan. 29, 2018, found at http://www.zdnet.com/article/windows-emergency-patch-microsofts-new-update-kills-off-intels-spectre-fix/ (last visited, Jan. 30, 2018).
- 41. The Meltdown and Spectre bugs are particularly pernicious because intrusions exploiting them are difficult or even impossible to detect, especially with Meltdown, since it uses speculative processing to access protected memory in a manner that normal logging functions do not register as having happened. "A Meltdown attack cannot be detected if it is carried out." *Meltdown...*, Wikipedia, *supra* (citations omitted).

#### The Harm to Plaintiff and Class Members and Need For Effective Remedies

- 42. Plaintiff and Class members purchased their personal computers believing that the Intel x86 CPUs inside were reliable and secure, as Intel advertised. They would never have purchased computers with Intel CPUs had they known that the CPUs contained the Meltdown and Spectre bugs or that Intel's practices were so careless that it would allow dangerous security flaws to exist in its x86 CPUs for years, ignoring warnings and copying the defects from one generation of chips to the next.
- 43. Plaintiff and Class members have been harmed by Intel's conduct. Their computers may already have been hacked, and they remain at risk of being hacked, with loss of

their personal information, including social security numbers, account passwords, and sensitive financial and identity information a very real and ongoing threat. Patches for the bugs do not provide an effective solution, and the patches will impair the performance of Plaintiff's and Class members' computers by up to 30 percent.

- 44. The dangers are not merely speculative. Theft of personal information is a serious and growing problem in the United States. The 2013 Identity Fraud Report by Javelin Strategy & Research reports that in 2012 identity theft fraudsters stole more than \$21 billion. The study found that nearly 1 in 4 data breach letter recipients became a victim of identity fraud, with breaches involving Social Security numbers to be the most damaging.
- 45. According to the Federal Trade Commission, identity theft victims must spend countless hours and money repairing the damage. Identity thieves use stolen personal information such as social security numbers for a variety of crimes, including credit card fraud, phone or utilities fraud, tax fraud, and bank/finance fraud. *See* http://www.ftc.gov/bcp/edu/microsites/idtheft/consumers/about-identity-theft.html.
- 46. The threat of their stolen personal information being used by unknown fraudsters will remain as a sword over the heads of Plaintiff and Class member for years to come. Unlike with ordinary data breaches, the Meltdown and Spectre bugs allow unlogged copying of memory by malware, making it difficult or impossible for Plaintiff and Class members, even with the best protective or forensic software, to know whether their personal information has been stolen. Also, as noted in a report by the United States Government Accountability Office on data breaches, stolen data is sold and traded on a black market, and "stolen data may be held for up to one year or more before being used to commit identity theft." *See GAO Report to Congressional Investigators, found at* http://www.gao.gov/new.items/d07737.pdf (last visited Jan. 23, 2018.
- 47. Intel should be held accountable and should provide compensation for the injuries it has inflicted on Plaintiff and Class members, as well as appropriate equitable and other relief. It should provide effective fixes for its x86 CPUs--ones that do not impair the performance of affected computers. Where feasible, Intel should simply replace Class members' Defective CPUs--which is the only known true fix to the Meltdown and Spectre bugs. It should also

provide credit monitoring and other measures to guard against hackers' misuse of Class members' stolen personal and financial information.

48. Intel continues to supply x86 CPUs to the marketplace and to promote computers containing its Defective CPUs. Intel's actions, omissions and irresponsible behavior represent an ongoing and continuing danger to Plaintiff, Class members and the general public.

#### **CLASS ACTION ALLEGATIONS**

49. Plaintiff brings this action on behalf of herself and a Class ("Class") initially defined as follows:

"All persons in the United States who purchased or own a personal computer incorporating an Intel x86 CPU."

Excluded from the Class are Defendant, its corporate parents, subsidiaries, officers, directors, employees, and partners.

- 50. Plaintiff reserves the right to amend the Class definition and to seek to define and/or certify sub-Classes as may be deemed necessary.
- 51. This action has been properly brought and may properly be maintained as a class action under Rule 23(a)(1-4), Rule 23(b)(1), (2) or (3), and/or Rule 23(c)(4) of the Federal Rules of Civil Procedure and case law thereunder.

## **Numerosity of the Class**

(Fed. R. Civ. P. 23(a)(1))

52. Members of the Class are so numerous that their individual joinder is impractical. The Class comprises at least hundreds of thousands of consumers. The precise number of Class members, and their addresses, are unknown to Plaintiff at this time, but can be ascertained from Defendant's records. Members of the Class may be notified of the pendency of this action by mail or email, supplemented (if deemed necessary or appropriate by the Court) by published notice.

## **Predominance of Common Questions of Fact and Law**

(Fed. R. Civ. P. 23(a)(2); 23(b)(3))

- 53. Common questions of law and fact exist as to all members of the Class. These questions predominate over the questions affecting only individual members of the Class. The common legal and factual questions include, without limitation:
- (a) Whether the Intel x86 CPUs in Class members' computers contain bugs that allow hackers to gain access to users' data;
- (b) Whether Intel was negligent in producing CPUs with the Meltdown and Spectre bugs;
- (c) The date that Intel learned or should have learned of the dangerous security vulnerabilities in its x86 CPUs;
- (d) Whether Intel ignored industry reports and warnings of Meltdown- and Spectre-type vulnerabilities in its x86 CPUs;
- (e) Whether Intel should have notified Class members when it learned that the x86 CPUs in their computers contained the Meltdown and Spectre bugs;
- (f) Whether Defendant's practices, actions and omissions constitute unlawful, fraudulent and/or unfair business practices in violation of California Business and Professions Code section 17200 et seq.;
- (g) Whether Defendant violated the Magnuson-Moss Warranty Act, 15 U.S.C. §2301, et seq.;
- (h) Whether Defendant violated the California Consumers Legal Remedies Act, Cal. Civ. Code §§ 1770 *et seq.*, by, among other things, representing that its goods had characteristics, ingredients, uses, benefits, or quantities that they do not have; and by representing that its goods were of a particular standard, quality or grade when they are of another standard, quality or grade;
  - (i) Whether Defendant made negligent misrepresentations;
  - (j) Whether Defendant breached express and/or implied warranties;
  - (k) Whether Defendant was unjustly enriched; and

(l) The nature of the relief, including damages and equitable relief, to which Plaintiff and members of the Class are entitled.

#### **Typicality of Claims**

(Fed. R. Civ. P. 23(a)(3))

54. Plaintiff's claims are typical of the claims of the Class because Plaintiff and all Class members have personal computers containing Intel x86 CPUs.

#### **Adequacy of Representation**

(Fed. R. Civ. P. 23(a)(4))

- 55. Plaintiff is an adequate representative of the Class, because her interests do not conflict with the interests of the members of the Class and she has retained counsel competent and experienced in complex class action and consumer litigation.
- 56. The interests of the members of the Class will be fairly and adequately protected by Plaintiff and her counsel.

#### **Superiority of a Class Action**

(Fed. R. Civ. P. 23(b)(3))

57. A class action is superior to other available means for the fair and efficient adjudication of the claims of Plaintiff and members of the Class. The damages suffered by individual members of the Class, while significant, are small given the burden and expense of individual prosecution of the complex and extensive litigation necessitated by Defendant's conduct. Further, it would be virtually impossible for the members of the Class individually to redress effectively the wrongs done to them. And, even if members of the Class themselves could afford such individual litigation; the court system could not, given the tens of thousands of cases that would need to be filed. Individualized litigation would also present a potential for inconsistent or contradictory judgments. Individualized litigation would increase the delay and expense to all parties and the court system, given the complex legal and factual issues involved. By contrast, the class action device presents far fewer management difficulties and provides the benefits of single adjudication, economy of scale, and comprehensive supervision by a single court.

# Risk of Inconsistent or Dispositive Adjudications and the Appropriateness of Final Injunctive or Declaratory Relief

#### (Fed. R. Civ. P. 23(b)(1) And (2))

- 58. In the alternative, this action may properly be maintained as a class action because:
- (a) the prosecution of separate actions by individual members of the Class would create a risk of inconsistent or varying adjudication with respect to individual Class members, which would establish incompatible standards of conduct for the Defendant; or
- (b) the prosecution of separate actions by individual Class members would create a risk of adjudications with respect to individual members of the Class which would, as a practical matter, be dispositive of the interests of other members of the Class not parties to the adjudications, or substantially impair or impede their ability to protect their interests; or
- (c) Defendant has acted or refused to act on grounds generally applicable to the Class, thereby making appropriate final injunctive or corresponding declaratory relief with respect to the Class as a whole.

#### **Issue Certification**

#### (Fed. R. Civ. P. 23(c)(4))

59. In the alternative, common questions of fact and law, including those set forth in Paragraph 53 above, are appropriate for issue certification.

#### **FIRST CAUSE OF ACTION**

#### (Negligence)

- 60. Plaintiff incorporates by reference and realleges all paragraphs previously alleged herein and pleads this cause of action on behalf of herself and all members of the Class.
- 61. Defendant owed a duty of care to Plaintiff and members of the Class. Defendant breached that duty.
- 62. Intel is the designer and manufacture of the Defective CPUs, which it caused to be placed into personal computers purchased by Plaintiff and Class members.
- 63. Intel had a duty to take reasonable care in the design and manufacture of the Defective CPUs.

- 64. By the actions and omissions alleged herein, Intel violated its duty. Among other things, Intel produced CPUs with dangerous bugs that allow hackers access to incorporating computers; and for years, and across successive generations of CPUs, Intel copied such dangerous bugs to each new generation of x86 CPUs.
- 65. As a result of Intel's breaches and violations, Plaintiff and Class members suffered harm.
- 66. Intel's negligence was a substantial factor in the harm caused to Plaintiff and Class members.
- 67. At all relevant times, Plaintiff and members of the Class acted lawfully and with due care and did not contribute to the injuries suffered.
- 68. Accordingly, Plaintiff and members of the Class are entitled to damages and other appropriate relief, as prayed for hereunder.

#### **SECOND CAUSE OF ACTION**

#### (Negligent Misrepresentation)

- 69. Plaintiff realleges, as if fully set forth, each and every allegation set forth above, and pleads this cause of action on behalf of herself and all members of the Class.
- 70. Intel's actions and omissions alleged herein constitute negligent misrepresentation.
- 71. Intel misrepresented material facts concerning the x86 CPUs it caused to be incorporated into the personal computers of Plaintiff and Class members.
- 72. Intel had no reasonable grounds for believing that its misrepresentations were true.
- 73. Among other things, Intel represented that its CPUs were of high quality and would provide superior and secure performance. Intel knew or should have known but failed to disclose that, contrary to its representations, its CPUs contained dangerous defects and bugs that would expose the computers into which they were incorporated to security hazards, including hacking and loss of sensitive financial and personal information.
- 74. Intel made such misrepresentations with the intent to induce Plaintiff and Class members to rely on its misrepresentations and purchase computers containing its CPUs.

- 75. Plaintiff and Class members had no knowledge of the falsity of Intel's representations and reasonably believed them to be true. In justified reliance on Intel's misrepresentations, Plaintiff and Class members purchased and utilized personal computers containing Intel's Defective CPUs.
- 76. As a direct and proximate consequence, Plaintiff and Class members suffered harm. Among other things, their financial and personal information has been put at risk; and the performance of their computers will be significantly impaired.
- 77. Plaintiff and Class members are therefore entitled to damages and relief, as prayed for hereunder.

#### **THIRD CAUSE OF ACTION**

#### (Strict Liability for Product Defect)

- 78. Plaintiff realleges, as if fully set forth, each and every allegation set forth above, and pleads this cause of action on behalf of herself and all members of the Class.
  - 79. Defendant designed and manufactured the x86 CPUs.
  - 80. Defendant's x86 CPUs were defectively designed and/or manufactured.
- 81. Defendant placed its x86 CPUs into the stream of commerce. It caused them to be incorporated into personal computers that were sold to Plaintiff and Class members. It actively marketed and promoted the sale of those computers.
- 82. Plaintiff and Class members purchased and used personal computers incorporating the Defective CPUs. They used such personal computers and Defective CPUs in the manner intended.
- 83. Plaintiff and Class members were harmed by Defendant's Defective CPUs. Such harm was directly and proximately caused by the defective nature of the CPUs.
- 84. Plaintiff and Class members are entitled to damages and relief as prayed for hereunder.

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#### FOURTH CAUSE OF ACTION

(Violations of the Song-Beverly Consumer Warranty Act, Cal. Civ. Code § 1791, et seq., and Breach of Implied Warranty)

- 85. Plaintiff realleges and incorporates each and every preceding factual allegation as if fully written herein, and on behalf of herself and Class members asserts this cause of action against Defendant.
- 86. By the conduct alleged herein, Defendant violated the Song-Beverly Consumer Warranty Act, Cal. Civ. Code § 1791, et seq. ("Song-Beverly Act" or "SBCWA"), and committed breach of implied warranty.
- 87. The Defective CPUs are "consumer goods" within the meaning of Cal. Civ. Code § 1791(a).
  - 88. Defendant is a "manufacturer" within the meaning of Cal. Civ. Code § 1791(j).
- 89. Defendant impliedly warranted to Plaintiff and the Class members that the Defective CPUs were "merchantable" within the meaning of Cal. Civ. Code §§ 1791.1(a) and 1792.
- 90. Plaintiff and the Class members purchased personal computers containing the Defective CPUs manufactured by Defendant.
- 91. Cal. Civ. Code § 1791.1(a) states that the "Implied warranty of merchantability" or "implied warranty that goods are merchantable" means that "the consumer goods meet each of the following:"
  - "(1) Pass without objection in the trade under the contract description.
  - (2) Are fit for the ordinary purposes for which such goods are used.
  - (3) Are adequately contained, packaged and labeled. [and]
  - (4) Conform to the promises or affirmations of fact made on the container or label."
- 92. As the Defective CPUs contain dangerous flaws presenting a major security threat to owners, they could not pass without objection in the computer trade.
- 93. As the Defective CPUs contain dangerous bugs presenting a major security threat to owners, they are not fit for the ordinary purposes for which such good are used.

- 94. Defendant's conduct caused the Defective CPUs to be worth less than what Plaintiff and Class members paid and deprived Plaintiff and Class members of the benefit of their bargain.
- 95. As a direct and proximate result of Defendant's breach of duties, Plaintiff and Class members received goods in a condition that substantially impairs their value. Plaintiff and Class members have been damaged in that the Defective CPUs and the computers in which they are incorporated have a diminished value; and in that the Defective CPUs have placed Plaintiff and Class members at risk for having their personal data stolen and used by hackers.
- 96. Plaintiff and the Class members have met all of their obligations under the warranty, or otherwise have been excused from performance of such obligations as a result of Defendant's conduct.
- 97. Under Cal. Civ. Code §§ 1791.1(d) and 1794, Plaintiff and Class members are entitled to damages and other legal and equitable relief, and are also entitled to their attorney fees and costs, as prayed for hereunder.

#### **FIFTH CAUSE OF ACTION**

### (Breach of Express Warranty, Cal. Com. Code § 2313)

- 98. Plaintiff realleges and incorporates each and every preceding factual allegation as if fully written herein, and on behalf of herself and Class members asserts this cause of action against Defendant.
  - 99. Defendant breached an express warranty made to Plaintiff and Class members.
- 100. Defendant made an express warranty and/or approved the use of the expressed warranty to Plaintiff and the Class members that the computers they purchased containing Intel x86 CPUs would provide superior performance, safety, and security.
- 101. This express warranty made to Plaintiff and the Class members was listed as a feature of the personal computers containing x86 CPUs purchased by Plaintiff and Class members. This promise regarding the nature of the products marketed by Defendant specifically related to the goods being purchased and became the basis of the bargain.
- 102. Plaintiff and the Class members purchased their computers and the Defective CPUs based on the belief that they conformed to the express warranties that were made in the

product's specifications, casing or packaging. If Plaintiff and Class members had known of the true nature of the product, they would not have purchased the product for the price they paid.

- 103. Defendant breached the express warranty made to Plaintiff and the Class members by failing to supply goods that conformed to the warranty made. As a result, Plaintiff and Class members suffered injury.
- 104. Plaintiff and Class members are entitled to damages and other relief as set forth hereunder.

#### **SIXTH CAUSE OF ACTION**

#### (Violations of the Magnuson-Moss Warranty Act, 15 U.S.C. § 2301, et seq.)

- 105. Plaintiff realleges and incorporates each and every preceding factual allegation as if fully written herein, and asserts this claim on behalf of herself and Class members.
- 106. By its actions alleged herein, Defendant has breached written and implied warranties within the meaning of the Magnuson-Moss Warranty Act, 15 U.S.C. § 2301, *et seq.* ("MMWA" or "Magnuson-Moss").
- 107. The MMWA, 15 U.S.C. § 2310(d)(1), provides a private right of action for purchasers of consumer products against manufacturers or retailers who fail to comply with the terms of a written or implied warranty.
- 108. Plaintiff and the Class are "consumers," Defendant is a "supplier" and "warrantor," and the Defective CPUs are "consumer products," as defined by the Magnuson-Moss, 15 U.S.C. § 2301.
- 109. Defendant's written affirmations of fact, promises, and/or descriptions relating to its Defective CPUs and computers into which they were incorporated are each a "written warranty" as defined in the Magnuson-Moss, 15 U.S.C. § 2301.
- 110. Under the Magnuson-Moss, an "implied warranty" is one that "arise[s] under State law . . . in connection with the sale by a supplier of a consumer product." 15 U.S.C. § 2301.
- 111. As alleged herein, Defendant breached express and implied warranties with respect to the Defective CPUs that Defendant supplied for and that were in the personal computers purchased by Plaintiff and Class members.

112. As a direct and proximate result of the breaches of Defendant, Plaintiff and the Class have suffered injury, and pursuant to the Magnuson-Moss are entitled to damages and other relief as set forth hereunder.

#### **SEVENTH CAUSE OF ACTION**

(For Violations of the California Consumers Legal Remedies Act, Cal. Civ. Code §§ 1750, et seq.,)

- 113. Plaintiff incorporates by reference and realleges all paragraphs previously alleged as if fully set forth herein and further alleges as follows, and brings this cause of action on behalf of herself and all Class members.
- 114. Defendant's acts and practices violate the California Consumers Legal Remedies Act, Cal. Civ. Code §§ 1750, et seq. ("CLRA")
- 115. Defendant is a "person" within the meaning of California Civil Code sections 1761(c) and 1770, and provides "goods" within the meaning of Civil Code sections 1761(a) and 1770. Plaintiff and Class members, are "consumers" within the meaning of Civil Code sections 1761(d) and 1770. Each purchase of a personal computer containing an Intel x86 CPU by Plaintiff and Class members constitutes a "transaction" within the meaning of Civil Code sections 1761(e) and 1770.
- 116. The conduct and actions of Defendant complained of herein constitute violations of the Consumers Legal Remedies Act ("CLRA"), Cal. Civ. Code §§ 1770(a)(5), (a)(7) and (a)(9).
- 117. Defendant's acts, practices, representations, omissions, and courses of conduct with respect to the promotion, marketing and sale of the products at issue violate the Consumer Legal Remedies Act in that, among other things:
- (a) Defendant represented that its goods had characteristics, ingredients, uses, benefits, or quantities which they do not have in violation of Civil Code section 1770(a)(5);
- (b) Defendant represented that its goods were of a particular standard, quality or grade when they are of another standard, quality or grade in violation of Civil Code section 1770(a)(7); and

- (c) Defendant advertised its goods with the intent not to sell them as advertised in violation of Civil Code section 1770(a)(9).
- 118. As a direct and proximate result of Defendant's violations, Plaintiff and Class members were injured.
- 119. Plaintiff has attached hereto as Exhibit 1 the declaration of venue required by Civil Code § 1780(d).
- 120. Pursuant to the CLRA, Plaintiff seeks an order providing equitable relief and enjoining the acts and practices described above, and awarding attorneys' fees and costs.<sup>6</sup>

#### **EIGHTH CAUSE OF ACTION**

#### (Violations of the Unfair Competition Law, Bus. & Prof. Code §§ 17200, et seq.)

- 121. Plaintiff realleges, as if fully set forth, each and every allegation set forth above, and pleads this cause of action on behalf of herself and all members of the Class.
- 122. Defendant's business practices as complained of herein violate the Unfair Competition Law, Cal. Bus. & Prof. Code sections 17200, *et seq.* ("UCL").
- 123. Defendant's practices constitute "unlawful" business practices in violation of the UCL because, among other things, they violate statutory law and the common law.
- 124. Defendant's actions and practices constitute "unfair" business practices in violation of the UCL, because, among other things, they are immoral, unethical, oppressive, unconscionable, unscrupulous or substantially injurious to consumers, and/or any utility of such practices is outweighed by the harm caused consumers.
- 125. Defendant's actions and practices constitute "fraudulent" business practices in violation of the UCL because, among other things, they have a capacity and tendency to deceive members of the public.
- 126. As a result of Defendant's wrongful business practices, Plaintiff and Class members have suffered injury in fact.

<sup>&</sup>lt;sup>6</sup> Plaintiff does not at this time seek damages under the CLRA, but reserves the right to serve a demand on Defendant pursuant to the CLRA and thereafter, if that demand is not met, seek to amend her complaint to seek damages under the CLRA.

- 127. Defendant's wrongful business practices present an ongoing and continuing threat to the general public.
- 128. Accordingly, Plaintiff and Class members are entitled to judgment and equitable relief, and to attorneys' fees and costs of suit, as prayed for hereunder.

#### NINTH CAUSE OF ACTION

#### (Unjust Enrichment)

- 129. Plaintiff realleges and incorporates each and every preceding factual allegation as if fully written herein, and pleads this claim for unjust enrichment on behalf of herself and all Class members.
- 130. Plaintiff and Class members conferred a benefit upon Defendant. Plaintiff and members of the Class paid money for their personal computers with Intel x86 CPUs, a portion of which flowed to Defendant. Defendant retained that benefit.
- 131. Defendant retained that benefit under circumstances that make it inequitable for it to retain such benefit. Specifically, Defendant retained that benefit despite the fact that its supplied x86 CPUs were defective and rendered the personal computers defective and at high risk for data breach and loss of personal and financial information.
- 132. Plaintiff and Class members are therefore entitled to disgorgement and/or restitution as prayed for hereunder.

#### PRAYER FOR RELIEF

WHEREFORE, Plaintiff and the Class pray for relief and judgment against Defendant, as follows:

- A. Certifying the Class pursuant to Rule 23 of the Federal Rules of Civil Procedure, certifying Plaintiff as representatives of the Class and designating Plaintiff's counsel as counsel for the Class;
- B. Awarding Plaintiff and the Class compensatory damages, in an amount exceeding \$5,000,000, to be determined by proof;
- C. Awarding Plaintiff and the Class statutory damages;
- D. Awarding Plaintiff and the Class punitive damages;
- E. For declaratory and equitable relief, including restitution and disgorgement;

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1	F. For an order enjoining Defendant from continuing to engage in the wrongful act			
2		and practices alleged herein;		
3	G.	G. For injunctive relief requiring Defendant to take steps to repair the injury caused		
4		by its wrongful conduct and to prevent reoccurrence;		
5	H.	For injunctive relief requiring Defendant to repair or replace the Defective CPUs		
6		in Plaintiff's and Class members' computers;		
7	I.	Awarding Plaintiff and the Class the costs of prosecuting this action, including		
8		expert witness fees;		
9	J.	Awarding Plaintiff and the Class reasonable attorney fees;		
10	K.	Awarding pre-judgment and post-judgment interest; and		
11	L.	Granting such other relief as this Court may deem just and proper.		
12				
13	DEMAND FOR JURY TRIAL			
14	Plaintiff Gloria K. Park hereby demands trial by jury of all claims so triable.			
15				
16	<b>.</b>	Respectfully submitted,		
17	Date: Februa	ary 1, 2018 By: <u>/s/ Gordon M. Fauth, Jr.</u> Gordon M. Fauth, Jr.		
		Of Counsel		
18		Rosanne L. Mah Of Counsel		
19		FINKELSTEIN THOMPSON LLP		
20		100 Pine Street, Suite 1250		
		San Francisco, California 94111		
21		Direct Telephone: (510) 238-9610		
22		Telephone: (415) 398-8700		
23		Facsimile: (415) 398-8704		
24		FINKELSTEIN THOMPSON LLP		
25		3201 New Mexico Ave., NW, Suite 395 Washington, D.C. 20016		
		Telephone: (202) 337-8000		
26		Facsimile: (202) 337-8090		
27		Attornary for Individual and Dangeratative		
28		Attorneys for Individual and Representative Plaintiff Gloria K. Park		
		27		

# Exhibit 1

1	Gordon M. Fauth, Jr. (SBN: 190280)					
	gfauth@finkelsteinthompson.com Of Counsel					
2	Rosanne L. Mah (SBN: 242628)					
3	rmah@finkelsteinthompson.com					
4	Of Counsel FINKELSTEIN THOMPSON LLP					
5	100 Pine Street, Suite 1250					
6	San Francisco, California 94111 Direct: (510) 238-9610					
7	Telephone: (415) 398-8700					
8	Facsimile: (415) 398-8704					
9	Attorneys for Individual and Representative   Plaintiff Gloria K. Park					
10						
11	UNITED STATES DISTRICT COURT					
12	NORTHERN DISTRICT OF CALIFORNIA					
13	SAN JOSE DIVISION					
14						
15						
16	GLORIA K. PARK, an Individual, on behalf of					
17	herself and all others similarly situated,	DECLARATION OF GORDON M. FAUTH, JR. PURSUANT TO CALIFORNIA CIVIL CODE § 1780(d)				
18	Plaintiff,					
	vs.					
19	INTEL CORPORATION, a Deleware					
20	Corporation with principal place of business in California,					
21	Camorna,					
22	Defendant.					
23						
24						
25	I, Gordon M. Fauth, Jr., declare as follows:					
26	1. I am counsel for Plaintiff in this action. I have personal knowledge of the matters					
27	set forth herein and/or make these statements based on information and belief; and, if called as a					
28	witness, I could and would competently testify thereto.					
~						
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- 2. Venue is proper in this court pursuant to California Civil Code § 1780(d) based on the following:
- a. Defendant Intel Corporation has its principal place of business in Santa Clara, California, and within the Northern District of California, San Jose Division.
- b. The events giving rise to the claims at issue in the litigation arose in or emanated from Santa Clara County, California and this Judicial District.

I declare under penalty of perjury under the laws of the State of California and the United States that the foregoing is true and correct.

Executed February 2, 2018 at Alameda, California.

Gordon M. Fauth, Jr.