IN THE UNITED STATES DISTRICT COURT FOR THE SOUTHERN DISTRICT OF NEW YORK

BOT M8 LLC, a Delaware Limited Liability Company)
Plaintiff, v.	Civil Action No DEMAND FOR JURY TRIAL
SONY CORPORATION OF AMERICA, a New York Corporation; SONY CORPORATION, a Japanese Corporation; and SONY INTERACTIVE ENTERTAINMENT LLC, a California Limited Liability Company,)))))
Defendants.)))

COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff Bot M8 LLC ("Bot M8") files this Complaint for Patent Infringement and Demand for Jury Trial against Sony Interactive Entertainment, Sony Interactive Entertainment LLC, Sony Corporation of America, and Sony Corporation (collectively, "Sony"), and alleges as follows:

THE PARTIES

- 1. Plaintiff Bot M8 is a Delaware Limited Liability Company.
- 2. Defendant Sony Corporation of America ("SCA") is a corporation organized and existing under the laws of the State of New York, having a principal place of business at 25 Madison Avenue, New York, New York 10010. SCA is a wholly-owned subsidiary of Japanese conglomerate Sony Corporation and is the United States headquarters of Sony Corporation. Upon information and belief, Defendant Sony Corporation of America has authority to negotiate and enter into patent licenses on behalf of Sony Corporation.

- 3. Defendant Sony Corporation is a corporation organized and existing under the laws of Japan, with a principal place of business at 1-7-1 Konan, Minato-ku, Tokyo 108-0075, Japan. Sony Corporation is a Japanese multinational conglomerate, with businesses including gaming, consumer and professional electronics, entertainment and financial services.
- 4. Sony Interactive Entertainment is a multinational video game and digital entertainment company that is a wholly-owned subsidiary of Japanese conglomerate Sony Corporation. Defendant Sony Interactive Entertainment LLC ("SIE") is the global and Americas regional headquarters of Sony Interactive Entertainment, located at 2207 Bridgepointe Parkway, San Mateo, California.
- 5. Sony designs, manufactures, uses, advertises, imports, distributes, offers for sale and sells PlayStation 4 consoles, PlayStation Network services and PlayStation 4 videogames, including single player games and multiplayer games. The PlayStation 4 console is an eighthgeneration home video game console developed by Sony, and launched on November 15, 2013 in North America.

JURISDICTION AND VENUE

- 6. This action arises under the Patent Act, 35 U.S.C. § 101 *et seq*. This Court has original jurisdiction over this controversy pursuant to 28 U.S.C. §§ 1331 and 1338.
 - 7. Venue is proper in this Court pursuant to 28 U.S.C. §§ 1391(b) and (c) and 1400(b).
- 8. This Court has personal jurisdiction over Defendant SCA because it is a New York corporation, with its headquarters within this District, and because it has committed acts of infringement and has a regular and established place of business within this District.
- 9. This Court has personal jurisdiction over Defendant Sony Corporation because it has committed acts of infringement and has a regular and established place of business within this

District through its subsidiary SCA and its regular contacts with and conduct of business within this District. As a foreign corporation, Sony Corporation is subject to venue within this District.

- 10. This Court has personal jurisdiction over SIE because it maintains regular and substantial business related to the acts of infringement giving rise to this action within this District, including the development and sale of the infringing products and services, upon Plaintiff's information and belief.
- 11. Additionally, this Court can further exercise personal jurisdiction over the Defendants in this action because they have committed acts of infringement and inducement of infringement in this District, including through designing, manufacturing, advertising, using, distributing, offering for sale and selling infringing products and services in this District and because Plaintiff's claims arise out of and relate to Defendants' acts of infringement and inducement of infringement in this District, and because the exercise of jurisdiction by this Court over Defendants would be reasonable. Defendants have more than minimal contacts with this District, such that the maintenance of this action within this District would not offend traditional notions of fair play and substantial justice.

BOT M8'S ASSERTED PATENTS

- 12. On March 4, 2008, the USPTO issued U.S. Patent No. 7,338,363 ("the '363 Patent"), titled "Gaming Machine, Server, and Program" to Kazuo Okada. All rights, title, and interests in the '363 Patent have been assigned to Bot M8 who is the sole owner of the '363 Patent. A true and correct copy of the '363 Patent is attached to this Complaint as **Exhibit 1** and is incorporated by reference herein.
- 13. The '363 Patent generally relates to a gaming machine, a server and a program. More particularly, the specification values of a game machine can be changed by each game player to meet each player's unique preference. One of the ways this is accomplished is by renewing

specification values of a game machine on the basis of the total of the number of medals paid out by a game player to the gaming machine. Furthermore, a game can be jointly played on two gaming machines, and the total results of the jointly played game can be used to update specification values.

- 14. On December 13, 2011, the USPTO issued U.S. Patent No. 8,078,540 ("the '540 Patent"), titled "Gaming Machine, Gaming Information Authentication and Acquisition Device, and Gaming Information Acquisition Device" to Tatsuhiko Tanimura. All rights, title, and interests in the '540 Patent have been assigned to Bot M8 who is the sole owner of the '540 Patent. A true and correct copy of the '540 Patent is attached to this Complaint as **Exhibit 2** and is incorporated by reference herein.
- 15. The '540 Patent generally relates to a gaming machine, a gaming information authenticating and loading device, and a loading device for loading gaming information, whereby gaming information recorded on a portable storage medium can be authenticated. Double authentication is used to authenticate gaming information and increase authentication reliability. Namely, before a motherboard loads an authentication program to authenticate actual gaming information, a preliminary authentication is carried out to confirm that the authentication program is a legitimate program which has not been manipulated.
- 16. On January 10, 2012, the USPTO issued U.S. Patent No. 8,095,990 ("the '990 Patent"), titled "Gaming Machine, Gaming Information Authentication Loading Device and Gaming Information Loading Device" to Tatsuhiko Tanimura. All rights, title, and interests in the '990 Patent have been assigned to Bot M8 who is the sole owner of the '990 Patent. A true and correct copy of the '990 Patent is attached to this Complaint as **Exhibit 3** and is incorporated by reference herein.

- 17. The '990 Patent generally relates to a gaming machine, a gaming information authentication loading device, and a gaming information loading device. Mutual authentication is used to increase authentication reliability. Namely, before a mutual authentication unit executes an authentication program to authenticate actual gaming information, the mutual authentication unit checks that the authentication program is a legitimate program.
- 18. On February 16, 2010, the USPTO issued U.S. Patent No. 7,664,988 ("the '988 Patent"), titled "Gaming Apparatus Having Memory Fault Detection" to Jun Haishima. All rights, title, and interests in the '988 Patent have been assigned to Bot M8 who is the sole owner of the '988 Patent. A true and correct copy of the '998 Patent is attached to this Complaint as **Exhibit 4** and is incorporated by reference herein.
- 19. The '988 Patent generally relates to an information process device in which a fault in hardware or software is inspected. Faults include, for example, damage, changes or falsification. The memory device in which a fault inspection program and a boot program are stored is different from another memory device where a game application program is stored. Both memory devices are connected to the same motherboard. If the memory device where the game application program is stored is damaged, the fault inspection program would not be affected. Therefore, fault detection reliability is increased.
- 20. On February 7, 2012, the USPTO issued U.S. Patent No. 8,112,670 ("the '670 Patent"), titled "Gaming Apparatus Having Memory Fault Detection" to Jun Haishima. All rights, title, and interest in the '670 Patent have been assigned to Bot M8 who is the sole owner of the '670 Patent. A true and correct copy of the '670 Patent is attached to this Complaint as **Exhibit 5** and is incorporated by reference herein.

- 21. The '670 Patent relates to an information process device in which a fault in hardware or software is inspected. The fault inspection program is stored in a memory device that is different from the memory device storing the boot program. Both memory devices are connected to the same motherboard. If the memory device where the game application program is stored is damaged, the fault inspection program would not be affected. Therefore, fault detection reliability is increased.
- 22. On March 3, 2009, the USPTO issued U.S. Patent No. 7,497,777 ("the '777 Patent"), titled "Gaming Machine and Computer-Readable Program Product" to Matsuzo Machida. All rights, title, and interest in the '777 Patent have been assigned to Bot M8 who is the sole owner of the '777 Patent. A true and correct copy of the '777 Patent is attached to this Complaint as **Exhibit 6** and is incorporated by reference herein.
- 23. The '777 Patent generally relates to a gaming program and a gaming machine. An object of the invention is to augment interests in a game. One of the ways this is accomplished is by the gaming machine displaying a plurality of characters on a display screen and the gaming program calculating an execution order of actions of the plurality of characters in the battle, where execution of actions of different characters can be independent from each other as long as the different characters take combination action.
- 24. The Asserted Patents are directed towards specific novel systems, apparatus, and methods for augmenting gaming experience, authentication reliability, and fault inspection reliability. The inventions of the Asserted Patents provide real-world benefits by solving real-world problems and providing real-world improvements within the realm of gaming. For example, the Asserted Patents disclose and specifically claim inventive concepts that represent significant improvements over conventional systems by teaching persons skilled in the art improve videogame

matchmaking through the use of specification values, improve videogame authentication reliability through mutual authentication and storage of the fault detection and game application programs on different memory devices, and improve player interest in video games through the use of multiple characters that can operate independently but execute combination actions. Thus, the Asserted Patents disclose more than just a simple combination of generic components to perform conventional activities.

SONY'S INFRINGING PRODUCTS AND TECHNOLOGIES

- 29. Since November 2013, Sony has been making, using, designing, advertising, selling, offering for sale, and importing into the United States and this District video game consoles, network services, video games which infringe Bot M8's patents set forth above.
- 30. The infringing products and services include (1) the PlayStation 4, PlayStation 4 Slim, and PlayStation 4 Pro consoles (collectively referred to as the "PlayStation 4"); (2) the Sony PlayStation Network; and (3) various Sony-developed video games that include balanced multiplayer matchmaking or mutual authentication functionality (collectively, the "Accused Products").
- 31. Sony has sold over 100 million PlayStation 4 consoles. Sony makes, uses, designs, advertises, sells, offers for sale, and imports into the United States and this District PlayStation 4 consoles. Through the PlayStation Store, Sony enables users to download video games as well as other digital content to be used on the PlayStation 4 console. Through various retailers, Sony enables users to purchase video games stored on digital optical disks to be used on the PlayStation 4 consoles. The PlayStation 4 console can read and execute game information stored on a digital optical disk when such digital optical disk is connected to the PlayStation 4 console. The PlayStation 4 console is a hardware platform, and it typically contains a 1TB hard drive.



32. The PlayStation Network is an online service which includes various offerings. The PlayStation Store is a digital media shop that offers a range of downloadable content both for purchase and free of charge. The content includes full games, free-to-play games, add-ons, demos, music, movies and background themes. PlayStation Plus is a PlayStation Network subscription service that provides users with access to premium features. These extras include early access to upcoming games, beta trials, regular store discounts, and the ability to have system software updates and game patches download automatically to the console. The PlayStation App which can be integrated in a smart device, allows users to control a PlayStation 4, redeem voucher codes, manage game downloads remotely, message gamer friends, invite friends to join a game, and take control and try out game from the user's own PlayStation 4.



- 30. Sony operates the PlayStation Network on PlayStation game servers, powerful computers used to store files including user account information, social network information, gaming programs, and gaming results. Sony's PlayStation game servers are located throughout the United States, including in Bronx, New York.
- 31. Sony makes, uses, designs, advertises, sells, offers for sale, and imports into the United States and this District various video games for use with the PlayStation 4. Sony distributes these PlayStation 4 video games on digital optical disks through retail channels or through digital download from the PlayStation Network to PlayStation 4 consoles. PlayStation 4 games are installed to the console's storage (internal or external). These games are executable by PlayStation 4 consoles. Uncharted 4 is a representative example of a multiplayer game developed and sold by Sony for use with the PlayStation 4.



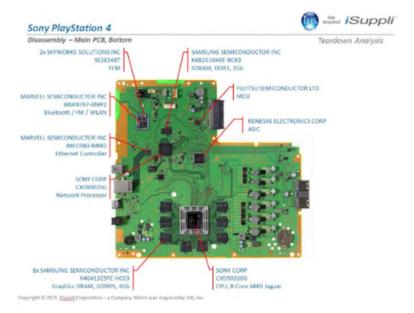
SONY'S INFRINGEMENT OF BOT M8 PATENTS

- 32. Sony has infringed and continues to infringe the Asserted Patents in this District and elsewhere in the United States by making, using, advertising, importing, selling, and offering for sale the Accused Products.
- 33. In addition to directly infringing the Asserted Patents under 35 U.S.C. § 271(a), either literally, under the doctrine of equivalents, or both, Sony indirectly infringes the Asserted Patents by instructing, directing, and requiring others, including its customers, purchasers, users, and developers, to combine or make all or some of the components of the apparatus/system claims, either literally or under the doctrine of equivalents.

COUNT I (Direct Infringement of the '363 Patent pursuant to 35 U.S.C. § 271(a))

- 34. Bot M8 repeats, realleges, and incorporates by reference, as if fully set forth herein, the allegations of the preceding paragraphs, as set forth above.
 - 35. Sony infringes at least Claim 1 of the '363 Patent in violation of 35 U.S.C. § 271(a).
- 36. Sony's infringement is based upon literal infringement or, in the alternative, infringement under the doctrine of equivalents.

- 37. Sony's infringement includes, making, using, advertising, importing, selling, and offering for sale PlayStation 4 consoles, PlayStation Network services and multiplayer games developed by Sony and its subsidiaries (collectively, the "363 Accused Products"). Sony's acts of making, using, marketing, importing, selling, and offering for sale the '363 Accused Products were and are without the permission, consent, authorization, or license of Bot M8.
- 38. The '363 Accused Products practice the patented invention of the '363 Patent and infringed the '363 Patent because they integrate mechanisms of facilitating gaming experiences by renewing and replacing specification value settings after each multiplayer match, and mechanisms of determining a second gaming machine operated by a co-player. The specification values can include total result data, offensive score, support score, who won, who lost, etc. The PlayStation Network and PlayStation 4 operating system running games provide one or more players to competitively play the game, in which a player can be matched with a plurality of available game players.
- 39. The PlayStation Network and PlayStation 4 operating system serve as a gaming machine determining device, because they provides one or more players to competitively play the game, and a player can be matched with a plurality of available game players.
- 40. The PlayStation 4 console transmits and receives data from the PlayStation Network servers for multiplayer gaming purposes, using a network processor, an Ethernet controller and a wireless communication module. These data include specification data.



http://gamingbolt.com/inside-the-playstation-4-motherboard-components-explained

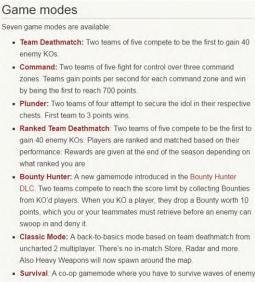
41. The PlayStation Network interface is the total result data receiving device which receives total game results from the PlayStation game server. These data are retrieved from the server by the PlayStation 4 operating system using the network interface. The PlayStation 4 and PlayStation Network display several specification values, including the total result data, offensive score, support score, who won, and who lost. This information is sent from the PlayStation game server and matchmaking service to end-users' consoles.



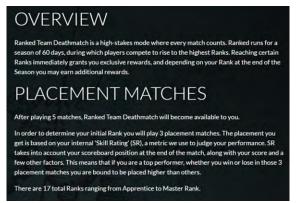
- 42. The PlayStation Network and PlayStation 4 operating system serve as a specification value determining device for determining a specification value based on the data of the total game result received by the total result data receiving device. The PlayStation Network and PlayStation 4 operating system utilize a specification value in their software code base.
- 43. The PlayStation 4 provides a specification value setting in software modules and gaming programs, the specification value can be a character level, points, currency, a title, a rank, or a reward. The specification value can have an effect on matchmaking for the next multiplayer match. The PlayStation 4 operating system, loaded on a PlayStation 4 console, manages computer hardware and software resources and provides services for software modules to set at least one specification value as a control condition for game control purposes. Game results are written into a memory of the PlayStation 4 console and are calculated by the CPU of the PlayStation 4 console.
- 44. "Uncharted 4" is a multiplayer, multi-character game made by Naughty Dog, Inc., a subsidiary of Sony Interactive Entertainment. Uncharted 4 can be downloaded to PlayStation 4 console from the PlayStation Network or can be bought in physical form through various retailers,

such as Amazon.com. The PlayStation 4 operating system runs the Uncharted 4 video game. Uncharted 4 is a representative example of the use of speciation values in the Accused Products for matchmaking purposes.

45. Uncharted 4 includes a multiplayer matchmaking system. The matchmaking system takes into consideration the specification value settings. Uncharted 4 has multiple multiplayer modes including Team Deathmatch, Command, Plunder, Ranked Team Deathmatch, Bounty Hunter, Classic Mode and Survival. These game modes utilize different specification value settings to facilitate matchmaking. For example, in Ranked Team Deathmatch, an initial Rank is determined with 3 placement matches. The placement matches are based on the internal "Skill Rating." This is a metric used to judge performance. Skill Rating takes into account one's scoreboard position along with other factors. This Skill Rating can also be a specification value.

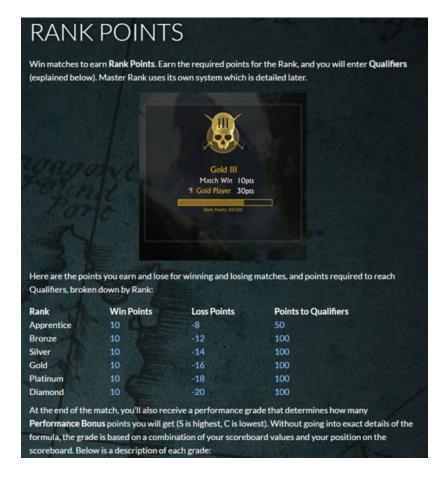


http://uncharted.wikia.com/wiki/Uncharted_4: A_Thief's_End_multiplayer



http://www.unchartedthegame.com/rank-system/the-system

46. Uncharted 4 includes Rank Points which can be a specification value.



http://www.unchartedthegame.com/rank-system

47. As shown below, the player obtained an "idol" and in game currency both of which may be specification values, impacting matching.



http://www.unchartedthegame.com/en-us/multiplayer

48. Specification values are renewed and replaced after each multiplayer match for matching purposes. For example, in Ranked Team Deathmatch an initial Rank is determined with 3 placement matches. The placement matches are based on the internal "Skill Rating" which is a metric used to judge performance. Skill Rating takes into account one's scoreboard position along with other factors. This Skill Rating is renewed after each match.



http://www.unchartedthegame.com/rank-system/the-system

- 49. When new specification data are calculated, the PlayStation 4 renews the specification value, set by the specification value setting device, with the specification value determined by the specification value determining device.
- 50. To the extent the '363 Accused Products include hardware or software owned by third parties, the '363 Accused Products still infringe the '363 Patent because Sony is vicariously liable for making, selling, offering for sale, and/or using the patented technology by controlling the design and operation of the Accused Products that are made, used and sold. For example, pursuant to contractual license agreements, Sony directs and controls its customers' use of the Accused Products. Further, Sony derives a benefit from the manufacture and use of every component of the entire system.
- 51. Sony's infringement of the '363 Patent injured and is injuring Bot M8 in an amount to be proven at trial, but not less than a reasonable royalty.

COUNT II (Indirect Infringement of the '363 Patent pursuant to 35 U.S.C. § 271(b))

52. Bot M8 repeats, realleges, and incorporates by reference, as if fully set forth herein, the allegations of the preceding paragraphs, as set forth above.

- 53. In addition to directly infringing the '363 Patent, Sony induces infringement under 35 U.S.C. § 271(b) by directing and controlling its customers to use the '363 Accused Proudcts in an infringing manner.
- 54. Customers may not use PlayStation 4 consoles, the PlayStation Network, or various Sony developed video games without agreeing to various Sony contracts. These contracts provide that Sony owns all intellectual property in the Accused Products, that Sony owns the software operating the Accused Products, that customers may only use the Accused Products as provided for and directed by Sony, and that customers may not modify the Accused Products or use them other than as intended by Sony.
- 55. The following is an excerpt from the PlayStation 4 license. It confirms that Sony owns the PlayStation and the customer is only licensing the ability to use Sony's system. It also provides that the customer may not modify the PlayStation, and that Sony may modify the PlayStation's software without the consent of the user:

All rights to use System Software are granted by license only, and you are not granted any ownership rights or interests in System Software. SIE Inc and its licensors retain all intellectual property rights in System Software. All use of or access to System Software is subject to this Agreement's terms and applicable intellectual property laws. Except as this Agreement expressly grants, SIE Inc and its licensors reserve all rights in System Software.

2. RESTRICTIONS

You may not lease, rent, sublicense, publish, modify, patch, adapt or translate System Software. You may not reverse engineer, decompile or disassemble System Software, create System Software derivative works, or attempt to create System Software source code from its object code. You may not (i) use any unauthorized, illegal, counterfeit or modified hardware or software with System Software; (ii) use tools to bypass, disable or circumvent any PS4 system encryption, security or authentication mechanism; (iii) reinstall earlier versions of the System Software ("downgrading"); (iv) violate any laws, regulations or statutes or rights of SIE Inc or third parties in connection with your access to

or use of System Software; (v) use any hardware or software to cause System Software to accept or use unauthorized, illegal or pirated software or hardware; (vi) obtain System Software in any manner other than through SIE Inc's authorized distribution methods; or (vii) exploit System Software in any manner other than to use it with your PS4 system according to the accompanying documentation and with authorized software or hardware, including use of System Software to design, develop, update or distribute unauthorized software or hardware for use in connection with your PS4 system.

These restrictions will be construed to apply to the greatest extent permitted by the law in your jurisdiction.

3. SERVICES AND UPDATES; THIRD PARTY AGREEMENTS AND CONTENT

SIE Inc may provide you with certain System Software updates, upgrades or services. Some updates, upgrades or services may be provided automatically without notice to you when you sign in to PlayStationTMNetwork and others may be available to you through SIE Inc's website or authorized channels. You consent to SIE Inc providing you these automatic updates, upgrades and services. Services may include the latest update or download of a new release of System Software containing security patches, new technology or revised settings and features that may prevent access to unauthorized or pirated content or prevent use of unauthorized hardware or software in connection with your PS4 system. These updates, upgrades and services may have effects on the functionality of your PS4 system, and SIE Inc is not responsible to you for any such effects or any harm caused by the installation process.

You must install or have installed the most current version of System Software as soon as you reasonably can. Some updates, upgrades or services may change your current settings, cause a loss of data or content or cause functionality or feature loss. SIE Inc recommends that you regularly back up all data that you can.

https://doc.dl.playstation.net/doc/ps4-eula/ps4_eula_en.html.

56. The following is an excerpt from the PlayStation Network license:

Except as stated in this agreement, all content and software provided through PSN Services are licensed non-exclusively and revocably to you for your personal, private, non-transferable, non-commercial, limited use on a limited number of devices in the

country in which your Account is registered. All intellectual property rights subsisting in PSN Services, including all software, data, and content subsisting in or used in connection with PSN Services, the Online ID and access to content and hardware used in connection with PSN Services (collectively defined as "Property"), belong to SIE LLC, its affiliates and its licensors. This license and all use or access to Property is expressly conditioned on your compliance with this agreement's terms, applicable Usage Terms, other applicable agreements, if any, and all applicable copyright and intellectual property rights laws.

https://www.playstation.com/en-us/network/legal/terms-of-service/.

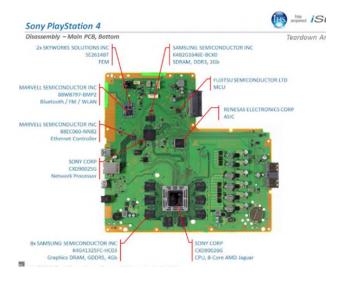
57. Sony knowingly and actively aided and abetted the direct infringement of the '363 Patent by instructing and encouraging its customers and developers to use the '363 Accused Products. Such instructions and encouragement included advising third parties to use the '363 Accused Products in an infringing manner, providing a mechanism through which third parties may infringe the '363 Patent, advertising and promoting the use of the '363 Accused Products in an infringing manner, and distributing guidelines and instructions to third parties on how to use the '363 Accused Products in an infringing manner.

(Direct Infringement of the '540 Patent pursuant to 35 U.S.C. § 271(a))

- 58. Bot M8 repeats, realleges, and incorporates by reference, as if fully set forth herein, the allegations of the preceding paragraphs, as set forth above.
 - 59. Sony infringes at least Claim 1 of the '540 Patent in violation of 35 U.S.C. § 271(a).
- 60. Sony's infringement is based upon literal infringement or, in the alternative, infringement under the doctrine of equivalents.
- 61. Sony's infringement includes making, using, advertising, importing, selling, and offering for sale PlayStation 4 consoles, PlayStation Network services, and video games developed by Sony or its subsidiaries (collectively, the "'540 Accused Products"). Sony's acts of making,

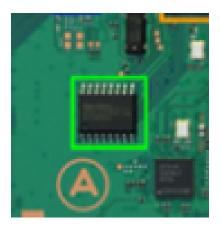
using, advertising, importing, selling, and offering for sale infringing products and services were and are without the permission, consent, authorization, or license of Bot M8.

- 62. The '540 Accused Products practice the patented invention of the '540 Patent and infringed the '540 Patent because they use double authentication to authenticate gaming information and increase authentication reliability. Namely, before the PlayStation 4 motherboard loads an authentication program to authenticate actual gaming information, a preliminary authentication is carried out to confirm that the authentication program is a legitimate program which has not been manipulated. The PlayStation reads an authentication program from the memory of the motherboard, and then, stores the read out authentication program in another memory of the motherboard.
- 63. The PlayStation 4 platform is built to execute game programs which are stored on an internal hard drive or a digital optical disk while utilizing temporary memory such as RAM or Flash memory. The PlayStation 4 includes a motherboard with an 8 core x86-based CPU and 8GB of GDDR5 RAM. It also features Samsung's K4B2G1646E-BCK0 DDR3 SDRAM secondary chip. Authentication programs associated with the games are stored on the memory.



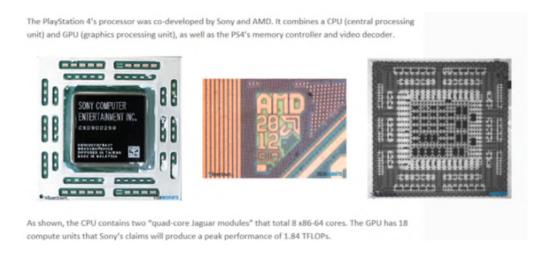
http://gamingbolt.com/inside-the-playstation-4-motherboard-components-explained

64. The PlayStation 4 motherboard contains flash memory. The CMOS Serial Flash Memory (shown in green below) is a Macronix MX25L25635FMI 256Mb Serial Flash Memory chip.



https://www.ifixit.com/Teardown/PlayStation+4+Teardown/19493

65. A PlayStation 4 includes a CPU for executing game programs. This CPU combines a traditional CPU with a GPU as well as the PlayStation's memory controller and video decoder. PlayStation 4 software manages physical memory allocation. System software and hardware are synchronized so that CPU, GPU and other processors can share memory.



http://techinsights.com/teardown.com/sony-playstation-4/

66. PlayStation 4 includes a mechanical hard drive, typically a 5400 RPM, 500 GB or 1 TB, SATA II. This hard drive is user-replaceable, with a standard 2.5" SATA drive. The removable hard drive serves as system storage for the PlayStation 4. Gaming information including an authentication program can be stored in the removable hard drive. A USB storage device such as an external HDD can be used as extended storage for gaming information. Games and add-ons from the PlayStation Store can be downloaded directly to such extended storages. Games stored on PlayStation system storage can be moved to such extended storage.



https://www.tech-recipes.com/rx/45938/ps4-how-to-upgrade-the-playstation-4-hard-drive/

- 67. PlayStation 4 gaming information can also be stored on a digital optical disk. The digital optical disk must be inserted into the PlayStation 4 console in order for the gaming programs to be executed.
- 68. The PlayStation 4 contains a connection unit configured to connect to the hard drive. It includes a Serial Advanced Technology Attachment as an interface that connects the host bus adapter to mass storage devices such as the one used in the PlayStation 4.



- 69. The PlayStation 4 writes the game program in the memory of the motherboard. The flash memory pulls the game program from the internal hard drive. The internal hard drive is removable and can be upgraded.
- 70. The authentication program for the PlayStation 4 hard drive, Operating System, and games is stored on PlayStation 4 MX25L25635FMI 256Mb Serial Flash Memory which handles the boot up process / firmware / BIOS / CMOS.



http://wkego.com/original-nor-ic-chip-mx25125635fmi-10g-for-ps4-motherboard-repairv

71. As shown below, upon boot up the PlayStation 4 includes a program that checks for errors and authenticates. The screen capture shows an error in authentication.

CE-36329-3 PS4 Error Code

An error has occurred with system software

- 01 Follow the on-screen instructions and select [Report Problem].
- Make sure that you have the latest version of the System Software installed by selecting [Settings] > [System Software Update]. The system should then be restarted.
- 03 If you have upgraded the Hard Disk Drive (HDD) in your system, please re-install the original HDD.
- 04 If the error occurs again, back up your saved data, and then go to [Settings] > [Initialization] and choose [Initialize PS4].
- 05 If the error continues and occurs with every application, or as soon as the application starts, please contact PlayStation Support.

https://www.playstation.com/en-gb/get-help/help-library/error-codes/ce-36329-3/

72. After installation of a new hard drive, the PlayStation 4 will have to go through the initial procedure. This is because the PlayStation authenticates as a new device based on new information contained on the new hard drive.



http://www.tech-recipes.com/rx/45938/ps4-how-to-upgrade-the-playstation-4-hard-drive/

73. When a user purchases a PlayStation 4 game disk from a retailer, even though game information is installed to the internal hard drive after the first time the user connects the digital optical disk to the PlayStation 4 console, the digital optical disk must be inserted into the PlayStation 4 console to play the game. This is necessary for authentication purposes and to prevent several users from playing the game without purchasing multiple copies.

- 74. In order to play games offline, a PlayStation 4 must be configured as the "primary." Otherwise the downloaded games cannot be played because the hard drive includes an authentication program for verifying that the PlayStation 4 is allowed to play the game.
- 75. This shows that PlayStation 4 will utilize the information obtained from the internal hard drive to determine whether the game can be authenticated and therefore is allowed to be played.

Since there is a thread on the front page with a lot of confusion and people not being able to access their games during the PSN Maintenance, with others chiming in about being able to play them fine (including myself), some people not knowing how to register their PS4 as Primary, and some people not realizing there was maintenance scheduled at all. I think it's probably time for a subreddit PSA.

You get asked to activate your PS4 when you first setup your system, but I think some people might skip it in the initial hurry to set everything up, not realizing what it does.

Here's how to activate your PS4 as Primary, and be able to play all your digital games offline whenever you want.

NOTE: You will not be able to do this immediately since online services are unavailable during Maintenance.

When Maintenance is over and PSN service are available again, log into your PS4 with your *primary* PSN account, and then go to:

- [Settings]
- | Settings
 | > PSN
- · > Activate as Your Primary PS4
- · Select [Activate]

If you've sent in your PS4 for repair and gotten it replaced, or gotten a new system in any way, you must deactivate your old system and activate the new one.

More information is available here:

https://support.us.playstation.com/app/answers/detail/a_id/5059/%7E/activate-%2F-deactivate-primary-ps4 or you can reply in comments if you have any questions. You can test if it works after you do this and then disconnect from the internet. If that doesn't work, comment here and we can try to troubleshoot it and figure out if there's a larger issue

https://www.reddit.com/r/PS4/comments/2euucu/psa_you_must_activate_your_ps4_as_primary_to_play/

76. To the extent the '540 Accused Products include hardware or software owned by third parties, the '540 Accused Products still infringe the '540 Patent because Sony is vicariously liable for making, selling, offering for sale, and/or using the patented technology by controlling the design and operation of the Accused Products that are made, used and sold. For example, pursuant to contractual license agreements, Sony directs and controls its customers' use of the Accused Products. Further, Sony derives a benefit from the manufacture and use of every component of the entire system.

77. Sony's infringement of the '540 Patent injured and is injuring Bot M8 in an amount to be proven at trial, but not less than a reasonable royalty.

(Indirect Infringement of the '540 Patent pursuant to 35 U.S.C. § 271(b))

- 78. Bot M8 repeats, realleges, and incorporates by reference, as if fully set forth herein, the allegations of the preceding paragraphs, as set forth above.
- 79. In addition to directly infringing the '540 Patent, Sony induces infringement under 35 U.S.C. § 271(b) by directing and controlling its customers to use the '540 Accused Proudcts in an infringing manner.
- 80. Customers may not use the PlayStation 4 console, PlayStation Network, or video games without agreeing to various Sony contracts. These contracts provide that Sony owns all intellectual property in the Accused Products, that Sony owns the software operating the Accused Products, that customers may only use the Accused Products as provided for and directed by Sony, and that customers may not modify the Accused Products or use them other than as intended by Sony.
- 81. The following is an excerpt from the PlayStation 4 license. It confirms that Sony owns the PlayStation and the customer is only licensing the ability to use Sony's system. It also provides that the customer may not modify the PlayStation, and that Sony may modify the PlayStation's software without the consent of the user:

All rights to use System Software are granted by license only, and you are not granted any ownership rights or interests in System Software. SIE Inc and its licensors retain all intellectual property rights in System Software. All use of or access to System Software is subject to this Agreement's terms and applicable intellectual property laws. Except as this Agreement expressly grants, SIE Inc and its licensors reserve all rights in System Software.

2. RESTRICTIONS

You may not lease, rent, sublicense, publish, modify, patch, adapt or translate System Software. You may not reverse engineer, decompile or disassemble System Software, create System Software derivative works, or attempt to create System Software source code from its object code. You may not (i) use any unauthorized, illegal, counterfeit or modified hardware or software with System Software; (ii) use tools to bypass, disable or circumvent any PS4 system encryption, security or authentication mechanism; (iii) reinstall earlier versions of the System Software ("downgrading"); (iv) violate any laws, regulations or statutes or rights of SIE Inc or third parties in connection with your access to or use of System Software; (v) use any hardware or software to cause System Software to accept or use unauthorized, illegal or pirated software or hardware; (vi) obtain System Software in any manner other than through SIE Inc's authorized distribution methods; or (vii) exploit System Software in any manner other than to use it with your PS4 system according to the accompanying documentation and with authorized software or hardware, including use of System Software to design, develop, update or distribute unauthorized software or hardware for use in connection with your PS4 system.

These restrictions will be construed to apply to the greatest extent permitted by the law in your jurisdiction.

3. SERVICES AND UPDATES; THIRD PARTY AGREEMENTS AND CONTENT

SIE Inc may provide you with certain System Software updates, upgrades or services. Some updates, upgrades or services may be provided automatically without notice to you when you sign in to PlayStationTMNetwork and others may be available to you through SIE Inc's website or authorized channels. You consent to SIE Inc providing you these automatic updates, upgrades and services. Services may include the latest update or download of a new release of System Software containing security patches, new technology or revised settings and features that may prevent access to unauthorized or pirated content or prevent use of unauthorized hardware or software in connection with your PS4 system. These updates, upgrades and services may have effects on the functionality of your PS4 system, and SIE Inc is not responsible to you for any such effects or any harm caused by the installation process.

You must install or have installed the most current version of System Software as soon as you reasonably can. Some updates, upgrades or services may change your current settings, cause a loss of data or content or cause functionality or feature loss. SIE Inc recommends that you regularly back up all data that you can.

https://doc.dl.playstation.net/doc/ps4-eula/ps4_eula_en.html.

82. The following is an excerpt from the PlayStation Network license:

Except as stated in this agreement, all content and software provided through PSN Services are licensed non-exclusively and revocably to you for your personal, private, non-transferable, non-commercial, limited use on a limited number of devices in the country in which your Account is registered. All intellectual property rights subsisting in PSN Services, including all software, data, and content subsisting in or used in connection with PSN Services, the Online ID and access to content and hardware used in connection with PSN Services (collectively defined as "Property"), belong to SIE LLC, its affiliates and its licensors. This license and all use or access to Property is expressly conditioned on your compliance with this agreement's terms, applicable Usage Terms, other applicable agreements, if any, and all applicable copyright and intellectual property rights laws.

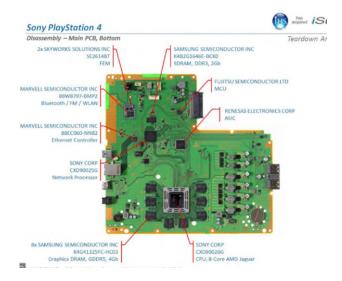
https://www.playstation.com/en-us/network/legal/terms-of-service/.

83. Sony knowingly and actively aided and abetted the direct infringement of the '540 Patent by instructing and encouraging its customers and developers to use the '540 Accused Products. Such instructions and encouragement included advising third parties to use the '540 Accused Products in an infringing manner, providing a mechanism through which third parties may infringe the '540 Patent, advertising and promoting the use of the '540 Accused Products in an infringing manner, and distributing guidelines and instructions to third parties on how to use the '540 Accused Products in an infringing manner.

COUNT V (Direct Infringement of the '990 Patent pursuant to 35 U.S.C. § 271(a))

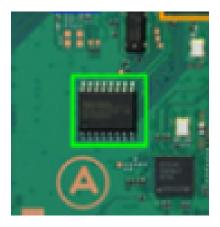
- 84. Bot M8 repeats, re-alleges, and incorporates by reference, as if fully set forth herein, the allegations of the preceding paragraphs, as set forth above.
 - 85. Sony infringes at least Claim 9 of the '990 Patent in violation of 35 U.S.C. § 271(a).

- 86. Sony's infringement is based upon literal infringement or, in the alternative, infringement under the doctrine of equivalents. Sony's infringement includes making, using, marketing, importing, selling, and offering for sale Sony's PlayStation 4 consoles, PlayStation Network services and video games developed by Sony or its subsidiaries (collectively, the "'990 Accused Products"). Sony's acts of making, using, marketing, importing, selling, and offering for sale the '990 Accused Products were and are without the permission, consent, authorization, or license of Bot M8.
- 87. The '990 Accused Products practice the patented invention of the '990 Patent and infringed the '990 Patent because they use double authentication to authenticate gaming information and increase authentication reliability. Namely, before the PlayStation 4 motherboard loads an authentication program to authenticate actual gaming information, a preliminary authentication is carried out to confirm that the authentication program is a legitimate program which has not been manipulated. The PlayStation reads an authentication program from the memory of the motherboard, and then, stores the read out authentication program in another memory of the motherboard.
- 88. The PlayStation 4 platform is built to execute game programs which are stored on an internal hard drive or an extended storage while utilizing temporary memory such as RAM or Flash memory. The PlayStation 4 includes a motherboard with an 8 core x86-based CPU and 8GB of GDDR5 RAM. It also features Samsung's K4B2G1646E-BCK0 DDR3 SDRAM secondary chip. Game programs as well as authentication programs associated with the games are temporarily stored on the memory when executed.



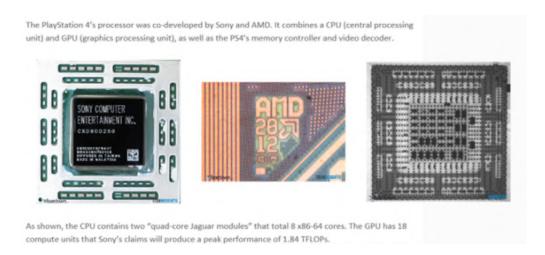
http://gamingbolt.com/inside-the-playstation-4-motherboard-components-explained

89. The PlayStation 4 motherboard contains flash memory. The CMOS Serial Flash Memory (shown in green below) is a Macronix MX25L25635FMI 256Mb Serial Flash Memory chip.



https://www.ifixit.com/Teardown/PlayStation+4+Teardown/19493

90. A PlayStation 4 includes a CPU for executing game programs. This CPU combines a traditional CPU with a GPU as well as the PlayStation's memory controller and video decoder. PlayStation 4 software manages physical memory allocation. System software and hardware are synchronized so that CPU, GPU and other processors can share memory.



http://techinsights.com/teardown.com/sony-playstation-4/

91. PlayStation 4 includes a mechanical hard drive, typically a 5400 RPM, 500 GB or 1 TB, SATA II. This hard drive is user-replaceable, with a standard 2.5" SATA drive. The removable hard drive serves as system storage of the PlayStation 4. Gaming information including an authentication program can be stored in the removable hard drive. A USB storage device such as an external HDD can be used as extended storage for gaming information. Games and add-ons from PlayStation Store can be downloaded directly to such extended storages. Games stored on PlayStation system storage can be moved to such extended storages.



https://www.tech-recipes.com/rx/45938/ps4-how-to-upgrade-the-playstation-4-hard-drive/

- 92. PlayStation 4 gaming information can also be stored on a digital optical disk. The digital optical disk needs to connect to the PlayStation 4 console in order for the gaming programs and to be executed. When such digital optical disk is connected to the PlayStation 4 console, gaming information stored on such digital optical disk begins to be transferred to the internal hard drive. The reason is that accessing information from the internal hard drive is faster than accessing information from the digital optical disk.
- 93. The PlayStation 4 contains a connection unit configured to connect to the hard drive. It includes a Serial Advanced Technology Attachment as an interface that connects the host bus adapter to mass storage devices such as the one used in the PlayStation 4.



https://www.youtube.com/watch?v=1z5foyc1jqs&index=4&list=PLkT5rNlYPHOmL2oiNuCsok l4Ftlvj-CN4

94. The PlayStation 4 writes the game program in the memory of the motherboard. The flash memory pulls the game program from the internal hard drive. The internal hard drive is removable and can be upgraded.

95. The authentication program for the PlayStation 4 hard drive, Operating System, and games is stored on PlayStation 4 MX25L25635FMI 256Mb Serial Flash Memory which handles the boot up process / firmware / BIOS / CMOS.



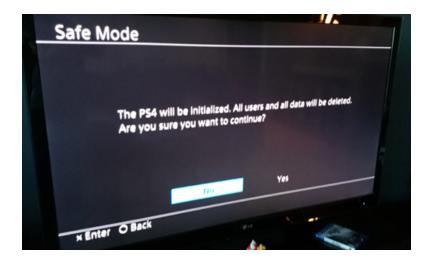
http://wkego.com/original-nor-ic-chip-mx25125635fmi-10g-for-ps4-motherboard-repairv

96. As shown below, upon boot up the PlayStation 4 includes a program that checks for errors and authenticates. The screen capture shows an error in authentication.

CE-36329-3 PS4 Error Code

An error has occurred with system software

- D1 Follow the on-screen instructions and select [Report Problem].
 D2 Make sure that you have the latest version of the System Software installed by selecting [Settings] > [System Software Update]. The system should then be restarted.
 D3 If you have upgraded the Hard Disk Drive (HDD) in your system, please re-install the original HDD.
 D4 If the error occurs again, back up your saved data, and then go to [Settings] > [Initialization] and choose [Initialize PS4].
 D5 If the error continues and occurs with every application, or as soon as the application starts, please contact PlayStation Support.
 https://www.playstation.com/en-gb/get-help/help-library/error-codes/ce-36329-3/.
- 97. After installation of a new hard drive, the PlayStation 4 will have to go through the initial procedure. This is because the PlayStation authenticates as a new device based on new information contained on the new hard drive.



http://www.tech-recipes.com/rx/45938/ps4-how-to-upgrade-the-playstation-4-hard-drive/

- 98. When a user purchases a PlayStation 4 game disk from a retailer, even though game information is installed to the internal hard drive after the first time the user connects the digital optical disk to the PlayStation 4 console, every time when the user tries to play the game, the digital optical disk has to be connected to the PlayStation 4 console. The purpose is to authenticate that the user purchased the game disk or have possession of the game disk. This is to make sure that several people can't play the same game at the same time with only one of them having bought it.
- 99. In order to play games offline, a PlayStation 4 must be configured as the "primary." Otherwise the downloaded games cannot be played because the hard drive includes an authentication program for verifying that the PlayStation 4 is allowed to play the game.
- 100. This shows that PlayStation 4 will utilize the information obtained from the internal hard drive to determine whether the game can be authenticated and therefore is allowed to be played.

Since there is a thread on the front page with a lot of confusion and people not being able to access their games during the PSN Maintenance, with others chiming in about being able to play them fine (including myself), some people not knowing how to register their PS4 as Primary, and some people not realizing there was maintenance scheduled at all, I think it's probably time for a subreddit PSA.

You get asked to activate your PS4 when you first setup your system, but I think some people might skip it in the initial hurry to set everything up, not realizing what it does.

Here's how to activate your PS4 as Primary, and be able to play all your digital games offline whenever you want.

NOTE: You will not be able to do this immediately since online services are unavailable during Maintenance.

When Maintenance is over and PSN service are available again, log into your PS4 with your primary PSN account, and then go to:

- [Settings]
- > PSN
- · > Activate as Your Primary PS4
- · Select [Activate]

If you've sent in your PS4 for repair and gotten it replaced, or gotten a new system in any way, you must deactivate your old system and activate the new one.

More information is available here:

https://support.us.playstation.com/app/answers/detail/a_id/5059/%7E/activate-%2F-deactivate-primary-ps4 or you can reply in comments if you have any questions. You can test if it works after you do this and then disconnect from the internet. If that doesn't work, comment here and we can try to troubleshoot it and figure out if there's a larger issue

https://www.reddit.com/r/PS4/comments/2euucu/psa_you_must_activate_your_ps4_as_primary_to_play/

- 101. To the extent the '990 Accused Products include hardware or software owned by third parties, the '990 Accused Products still infringe the '990 Patent because Sony is vicariously liable for making, selling, offering for sale, and/or using the patented technology by controlling the design and operation of the Accused Products that are made, used and sold. For example, pursuant to contractual license agreements, Sony directs and controls its customers' use of the Accused Products. Further, Sony derives a benefit from the manufacture and use of every component of the entire system.
- 102. Sony's infringement of the '990 Patent injured and is injuring Bot M8 in an amount to be proven at trial, but not less than a reasonable royalty.

(Indirect Infringement of the '990 Patent pursuant to 35 U.S.C. § 271(b))

103. Bot M8 repeats, realleges, and incorporates by reference, as if fully set forth herein, the allegations of the preceding paragraphs, as set forth above.

- 104. In addition to directly infringing the '990 Patent, Sony induces infringement under 35 U.S.C. § 271(b) by directing and controlling its customers to use the '990 Accused Proudcts in an infringing manner.
- 105. Customers may not use the PlayStation 4 console, PlayStation Network or video games without agreeing to various Sony contracts. These contracts provide that Sony owns all intellectual property in the Accused Products, that Sony owns the software operating the Accused Products, that customers may only use the Accused Products as provided for and directed by Sony, and that customers may not modify the Accused Products or use them other than as intended by Sony.
- 106. The following is an excerpt from the PlayStation 4 license. It confirms that Sony owns the PlayStation and the customer is only licensing the ability to use Sony's system. It also provides that the customer may not modify the PlayStation, and that Sony may modify the PlayStation's software without the consent of the user:

All rights to use System Software are granted by license only, and you are not granted any ownership rights or interests in System Software. SIE Inc and its licensors retain all intellectual property rights in System Software. All use of or access to System Software is subject to this Agreement's terms and applicable intellectual property laws. Except as this Agreement expressly grants, SIE Inc and its licensors reserve all rights in System Software.

2. RESTRICTIONS

You may not lease, rent, sublicense, publish, modify, patch, adapt or translate System Software. You may not reverse engineer, decompile or disassemble System Software, create System Software derivative works, or attempt to create System Software source code from its object code. You may not (i) use any unauthorized, illegal, counterfeit or modified hardware or software with System Software; (ii) use tools to bypass, disable or circumvent any PS4 system encryption, security or authentication mechanism; (iii) reinstall earlier versions of the System Software ("downgrading"); (iv) violate any laws, regulations or statutes or rights of SIE Inc or third parties in connection with your access to

or use of System Software; (v) use any hardware or software to cause System Software to accept or use unauthorized, illegal or pirated software or hardware; (vi) obtain System Software in any manner other than through SIE Inc's authorized distribution methods; or (vii) exploit System Software in any manner other than to use it with your PS4 system according to the accompanying documentation and with authorized software or hardware, including use of System Software to design, develop, update or distribute unauthorized software or hardware for use in connection with your PS4 system.

These restrictions will be construed to apply to the greatest extent permitted by the law in your jurisdiction.

3. SERVICES AND UPDATES; THIRD PARTY AGREEMENTS AND CONTENT

SIE Inc may provide you with certain System Software updates, upgrades or services. Some updates, upgrades or services may be provided automatically without notice to you when you sign in to PlayStationTMNetwork and others may be available to you through SIE Inc's website or authorized channels. You consent to SIE Inc providing you these automatic updates, upgrades and services. Services may include the latest update or download of a new release of System Software containing security patches, new technology or revised settings and features that may prevent access to unauthorized or pirated content or prevent use of unauthorized hardware or software in connection with your PS4 system. These updates, upgrades and services may have effects on the functionality of your PS4 system, and SIE Inc is not responsible to you for any such effects or any harm caused by the installation process.

You must install or have installed the most current version of System Software as soon as you reasonably can. Some updates, upgrades or services may change your current settings, cause a loss of data or content or cause functionality or feature loss. SIE Inc recommends that you regularly back up all data that you can.

https://doc.dl.playstation.net/doc/ps4-eula/ps4_eula_en.html.

107. The following is an excerpt from the PlayStation Network license:

Except as stated in this agreement, all content and software provided through PSN Services are licensed non-exclusively and revocably to you for your personal, private, non-transferable, non-commercial, limited use on a limited number of devices in the

country in which your Account is registered. All intellectual property rights subsisting in PSN Services, including all software, data, and content subsisting in or used in connection with PSN Services, the Online ID and access to content and hardware used in connection with PSN Services (collectively defined as "Property"), belong to SIE LLC, its affiliates and its licensors. This license and all use or access to Property is expressly conditioned on your compliance with this agreement's terms, applicable Usage Terms, other applicable agreements, if any, and all applicable copyright and intellectual property rights laws.

https://www.playstation.com/en-us/network/legal/terms-of-service/.

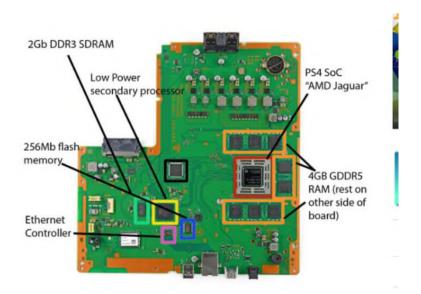
Patent by instructing and encouraging its customers and developers to use the '990 Accused Products. Such instructions and encouragement included advising third parties to use the '990 Accused Products in an infringing manner, providing a mechanism through which third parties may infringe the '990 Patent, advertising and promoting the use of the '990 Accused Products in an infringing manner, and distributing guidelines and instructions to third parties on how to use the '990 Accused Products in an infringing manner.

(Direct Infringement of the '988 Patent pursuant to 35 U.S.C. § 271(a))

- 109. Bot M8 repeats, re-alleges, and incorporates by reference, as if fully set forth herein, the allegations of the preceding paragraphs, as set forth above.
 - 110. Sony infringes at least Claim 1 of the '988 Patent in violation of 35 U.S.C. § 271(a).
- 111. Sony's infringement is based upon literal infringement or, in the alternative, infringement under the doctrine of equivalents.
- 112. Sony's infringement includes, making, using, advertising, importing, selling, and offering for sale PlayStation 4 consoles, PlayStation Network services, and video games developed by Sony and its subsidiaries (collectively, the "'988 Accused Products"). Sony's acts of making,

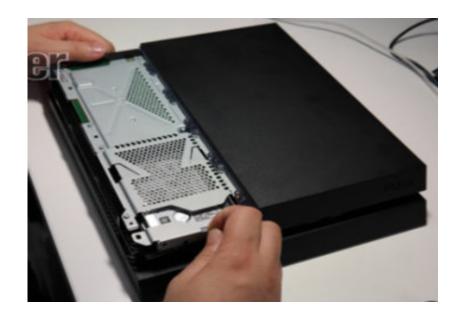
using, marketing, importing, selling, and offering for sale the '988 Accused Products were and are without the permission, consent, authorization, or license of Bot M8.

- 113. Sony's PlayStation 4 console is a gaming device configured to execute videogames. It contains a first memory device which is a serial flash memory which stores the boot program for the PlayStation 4 console. The serial flash memory contains BIOS/CMOS/Firmware. The BIOS type of boot program provides an abstraction layer for the hardware to interact with input/output (I/O) devices.
- 114. As shown below, the PlayStation 4 console comprises a motherboard on which the flash memory is provided.



 $\frac{http://ps4daily.com/2013/11/playstation-4-has-a-secondary-processor-with-256-mb-dedicated-\\ \underline{ram/}$

115. PlayStation 4 comprises a second memory device consisting of the internal hard drive for storing a game application program for the game, this hard drive is connected to the motherboard utilizing a SATA connection.



 $\frac{http://www.ign.com/articles/2013/10/18/new-photos-show-how-to-replace-the-ps4-hard-drive}{drive}$

- 116. The PlayStation 4 console CPU serves as the control device for executing a fault inspection program. The fault inspection program is executed to test the internal hard drive. The fault inspection program will check for a variety of error in the internal hard drive that stores the game information and the main operating system.
- 117. As shown below, upon boot up the PlayStation 4 includes a program that checks for errors and faults.

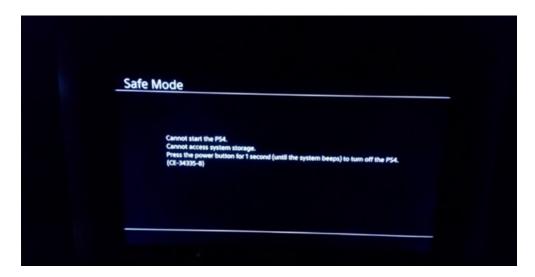
CE-36329-3 PS4 Error Code

An error has occurred with system software

- [01] Follow the on-screen instructions and select [Report Problem].
- Make sure that you have the latest version of the System Software installed by selecting [Settings] > [System Software Update]. The system should then be restarted.
- 03 If you have upgraded the Hard Disk Drive (HDD) in your system, please re-install the original HDD.
- 14 If the error occurs again, back up your saved data, and then go to [Settings] > [Initialization] and choose [Initialize PS4].
- 05 If the error continues and occurs with every application, or as soon as the application starts, please contact PlayStation Support.

https://www.playstation.com/en-gb/get-help/help-library/error-codes/ce-36329-3/

118. A screen capture is shown below of a situation where the first memory detects a fault occurring in the second memory device and the system cannot start.



https://www.youtube.com/watch?v=IZoQ2koOVhw

- 119. Thus, the '988 Accused Products practice the patented invention of the '988 Patent and infringe the '988 Patent because they include an information process device for detecting faults in hardware or software, which is stored in a different memory device from the game application program.
- 120. To the extent the '988 Accused Products include hardware or software owned by third parties, the '988 Accused Products still infringe the '988 Patent because Sony is vicariously liable for making, selling, offering for sale, and/or using the patented technology by controlling the design and operation of the Accused Products that are made, used and sold. For example, pursuant to contractual license agreements, Sony directs and controls its customers' use of the Accused Products. Further, Sony derives a benefit from the manufacture and use of every component of the entire system.
- 121. Sony's infringement of the '988 Patent injured and is injuring Bot M8 in an amount to be proven at trial, but not less than a reasonable royalty.

COUNT VIII

(Indirect Infringement of the '988 Patent pursuant to 35 U.S.C. § 271(b))

- 122. Bot M8 repeats, realleges, and incorporates by reference, as if fully set forth herein, the allegations of the preceding paragraphs, as set forth above.
- 123. In addition to directly infringing the '988 Patent, Sony induces infringement under 35 U.S.C. § 271(b) by directing and controlling its customers to use the '988 Accused Proudcts in an infringing manner.
- 124. Customers may not use the PlayStation 4, PlayStation Network, or video games without agreeing to various Sony contracts. These contracts provide that Sony owns all intellectual property in the Accused Products, that Sony owns the software operating the Accused Products, that customers may only use the Accused Products as provided for and directed by Sony, and that customers may not modify the Accused Products or use them other than as intended by Sony.
- 125. The following is an excerpt from the PlayStation 4 license. It confirms that Sony owns the PlayStation and the customer is only licensing the ability to use Sony's system. It also provides that the customer may not modify the PlayStation, and that Sony may modify the PlayStation's software without the consent of the user:

All rights to use System Software are granted by license only, and you are not granted any ownership rights or interests in System Software. SIE Inc and its licensors retain all intellectual property rights in System Software. All use of or access to System Software is subject to this Agreement's terms and applicable intellectual property laws. Except as this Agreement expressly grants, SIE Inc and its licensors reserve all rights in System Software.

2. RESTRICTIONS

You may not lease, rent, sublicense, publish, modify, patch, adapt or translate System Software. You may not reverse engineer, decompile or disassemble System Software, create System Software derivative works, or attempt to create System Software source code from its object code. You may not (i) use any unauthorized, illegal, counterfeit or modified hardware or software

with System Software; (ii) use tools to bypass, disable or circumvent any PS4 system encryption, security or authentication mechanism; (iii) reinstall earlier versions of the System Software ("downgrading"); (iv) violate any laws, regulations or statutes or rights of SIE Inc or third parties in connection with your access to or use of System Software; (v) use any hardware or software to cause System Software to accept or use unauthorized, illegal or pirated software or hardware; (vi) obtain System Software in any manner other than through SIE Inc's authorized distribution methods; or (vii) exploit System Software in any manner other than to use it with your PS4 system according to the accompanying documentation and with authorized software or hardware, including use of System Software to design, develop, update or distribute unauthorized software or hardware for use in connection with your PS4 system.

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https://doc.dl.playstation.net/doc/ps4-eula/ps4_eula_en.html.

126. The following is an excerpt from the PlayStation Network license:

Except as stated in this agreement, all content and software provided through PSN Services are licensed non-exclusively and revocably to you for your personal, private, non-transferable, non-commercial, limited use on a limited number of devices in the country in which your Account is registered. All intellectual property rights subsisting in PSN Services, including all software, data, and content subsisting in or used in connection with PSN Services, the Online ID and access to content and hardware used in connection with PSN Services (collectively defined as "Property"), belong to SIE LLC, its affiliates and its licensors. This license and all use or access to Property is expressly conditioned on your compliance with this agreement's terms, applicable Usage Terms, other applicable agreements, if any, and all applicable copyright and intellectual property rights laws.

https://www.playstation.com/en-us/network/legal/terms-of-service/.

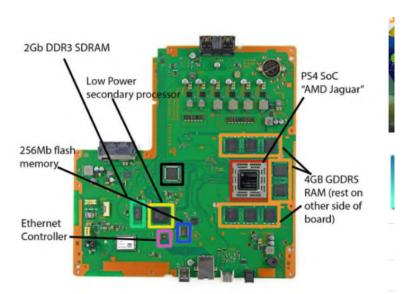
Patent by instructing and encouraging its customers and developers to use the '988 Accused Products. Such instructions and encouragement included advising third parties to use the '988 Accused Products in an infringing manner, providing a mechanism through which third parties may infringe the '988 Patent, advertising and promoting the use of the '988 Accused Products in an infringing manner, and distributing guidelines and instructions to third parties on how to use the '988 Accused Products in an infringing manner.

COUNT IX (Direct Infringement of the '670 Patent pursuant to 35 U.S.C. § 271(a))

- 128. Bot M8 repeats, re-alleges, and incorporates by reference, as if fully set forth herein, the allegations of the preceding paragraphs, as set forth above.
 - 129. Sony infringes at least Claim 1 of the '670 Patent in violation of 35 U.S.C. § 271(a).
- 130. Sony's infringement is based upon literal infringement or, in the alternative, infringement under the doctrine of equivalents.
- 131. Sony's infringement includes, making, using, advertising, importing, selling, and offering for sale PlayStation 4 consoles, PlayStation Network services, and video games developed

by Sony and its subsidiaries (collectively, the "'670 Accused Products"). Sony's acts of making, using, marketing, importing, selling, and offering for sale the '670 Accused Products were and are without the permission, consent, authorization, or license of Bot M8.

- 132. Sony's PlayStation 4 console is a gaming device configured to execute videogames. It contains a first memory device which is a serial flash memory which stores the boot program for the PlayStation 4 console. The serial flash memory contains BIOS/CMOS/Firmware. The BIOS type of boot program provides an abstraction layer for the hardware to interact with input/output (I/O) devices.
- 133. As shown below, the PlayStation 4 console comprises a motherboard on which the flash memory is provided.



 $\frac{http://ps4daily.com/2013/11/playstation-4-has-a-secondary-processor-with-256-mb-dedicated-\\ \underline{ram/}$

134. PlayStation 4 comprises a second memory device consisting of the internal hard drive for storing a game application program for the game, this hard drive is connected to the motherboard utilizing a SATA connection.



 $\frac{http://www.ign.com/articles/2013/10/18/new-photos-show-how-to-replace-the-ps4-hard-drive}{drive}$

- 135. The PlayStation 4 console CPU serves as the control device for executing a fault inspection program. The fault inspection program is executed to test the internal hard drive. The fault inspection program will check for a variety of error in the internal hard drive that stores the game information and the main operating system.
- 136. As shown below, upon boot up the PlayStation 4 includes a program that checks for errors and faults.

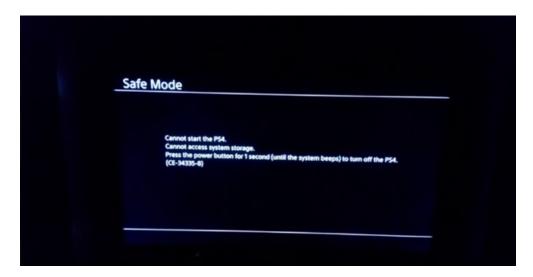
CE-36329-3 PS4 Error Code

An error has occurred with system software

- [01] Follow the on-screen instructions and select [Report Problem].
- **Q2** Make sure that you have the latest version of the System Software installed by selecting [Settings] > [System Software Update]. The system should then be restarted.
- 03 If you have upgraded the Hard Disk Drive (HDD) in your system, please re-install the original HDD.
- 14 If the error occurs again, back up your saved data, and then go to [Settings] > [Initialization] and choose [Initialize PS4].
- 05 If the error continues and occurs with every application, or as soon as the application starts, please contact PlayStation Support.

https://www.playstation.com/en-gb/get-help/help-library/error-codes/ce-36329-3/

137. A screen capture is shown below of a situation where the first memory detects a fault occurring in the second memory device and the system cannot start.



https://www.youtube.com/watch?v=IZoQ2koOVhw

- 138. Thus, the '670 Accused Products practice the patented invention of the '670 Patent and infringe the '670 Patent because they include an information process device for detecting faults in hardware or software, which is stored in a different memory device from the game application program.
- 139. To the extent the '670 Accused Products include hardware or software owned by third parties, the '670 Accused Products still infringe the '670 Patent because Sony is vicariously liable for making, selling, offering for sale, and/or using the patented technology by controlling the design and operation of the Accused Products that are made, used and sold. For example, pursuant to contractual license agreements, Sony directs and controls its customers' use of the Accused Products. Further, Sony derives a benefit from the manufacture and use of every component of the entire system.
- 140. Sony's infringement of the '670 Patent injured and is injuring Bot M8 in an amount to be proven at trial, but not less than a reasonable royalty.

COUNT X

(Indirect Infringement of the '670 Patent pursuant to 35 U.S.C. § 271(b))

- 141. Bot M8 repeats, realleges, and incorporates by reference, as if fully set forth herein, the allegations of the preceding paragraphs, as set forth above.
- 142. In addition to directly infringing the '670 Patent, Sony induces infringement under 35 U.S.C. § 271(b) by directing and controlling its customers to use the '670 Accused Proudcts in an infringing manner.
- 143. Customers may not use the PlayStation 4 console, PlayStation Network, or video games without agreeing to various Sony contracts. These contracts provide that Sony owns all intellectual property in the Accused Products, that Sony owns the software operating the Accused Products, that customers may only use the Accused Products as provided for and directed by Sony, and that customers may not modify the Accused Products or use them other than as intended by Sony.
- 144. The following is an excerpt from the PlayStation 4 license. It confirms that Sony owns the PlayStation and the customer is only licensing the ability to use Sony's system. It also provides that the customer may not modify the PlayStation, and that Sony may modify the PlayStation's software without the consent of the user:

All rights to use System Software are granted by license only, and you are not granted any ownership rights or interests in System Software. SIE Inc and its licensors retain all intellectual property rights in System Software. All use of or access to System Software is subject to this Agreement's terms and applicable intellectual property laws. Except as this Agreement expressly grants, SIE Inc and its licensors reserve all rights in System Software.

2. RESTRICTIONS

You may not lease, rent, sublicense, publish, modify, patch, adapt or translate System Software. You may not reverse engineer, decompile or disassemble System Software, create System Software derivative works, or attempt to create System Software

source code from its object code. You may not (i) use any unauthorized, illegal, counterfeit or modified hardware or software with System Software; (ii) use tools to bypass, disable or circumvent any PS4 system encryption, security or authentication mechanism; (iii) reinstall earlier versions of the System Software ("downgrading"); (iv) violate any laws, regulations or statutes or rights of SIE Inc or third parties in connection with your access to or use of System Software; (v) use any hardware or software to cause System Software to accept or use unauthorized, illegal or pirated software or hardware; (vi) obtain System Software in any manner other than through SIE Inc's authorized distribution methods; or (vii) exploit System Software in any manner other than to use it with your PS4 system according to the accompanying documentation and with authorized software or hardware, including use of System Software to design, develop, update or distribute unauthorized software or hardware for use in connection with your PS4 system.

These restrictions will be construed to apply to the greatest extent permitted by the law in your jurisdiction.

3. SERVICES AND UPDATES; THIRD PARTY AGREEMENTS AND CONTENT

SIE Inc may provide you with certain System Software updates, upgrades or services. Some updates, upgrades or services may be provided automatically without notice to you when you sign in to PlayStationTMNetwork and others may be available to you through SIE Inc's website or authorized channels. You consent to SIE Inc providing you these automatic updates, upgrades and services. Services may include the latest update or download of a new release of System Software containing security patches, new technology or revised settings and features that may prevent access to unauthorized or pirated content or prevent use of unauthorized hardware or software in connection with your PS4 system. These updates, upgrades and services may have effects on the functionality of your PS4 system, and SIE Inc is not responsible to you for any such effects or any harm caused by the installation process.

You must install or have installed the most current version of System Software as soon as you reasonably can. Some updates, upgrades or services may change your current settings, cause a loss of data or content or cause functionality or feature loss. SIE Inc recommends that you regularly back up all data that you can.

https://doc.dl.playstation.net/doc/ps4-eula/ps4_eula_en.html.

145. The following is an excerpt from the PlayStation Network license:

Except as stated in this agreement, all content and software provided through PSN Services are licensed non-exclusively and revocably to you for your personal, private, non-transferable, non-commercial, limited use on a limited number of devices in the country in which your Account is registered. All intellectual property rights subsisting in PSN Services, including all software, data, and content subsisting in or used in connection with PSN Services, the Online ID and access to content and hardware used in connection with PSN Services (collectively defined as "Property"), belong to SIE LLC, its affiliates and its licensors. This license and all use or access to Property is expressly conditioned on your compliance with this agreement's terms, applicable Usage Terms, other applicable agreements, if any, and all applicable copyright and intellectual property rights laws.

https://www.playstation.com/en-us/network/legal/terms-of-service/.

146. Sony knowingly and actively aided and abetted the direct infringement of the '670 Patent by instructing and encouraging its customers and developers to use the '670 Accused Products. Such instructions and encouragement included advising third parties to use the '670 Accused Products in an infringing manner, providing a mechanism through which third parties may infringe the '670 Patent, advertising and promoting the use of the '670 Accused Products in an infringing manner, and distributing guidelines and instructions to third parties on how to use the '670 Accused Products in an infringing manner.

COUNT XI (Direct Infringement of the '777 Patent pursuant to 35 U.S.C. § 271(a))

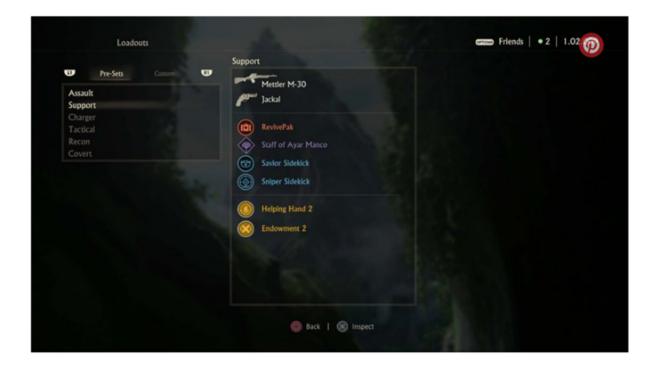
- 147. Bot M8 repeats, re-alleges, and incorporates by reference, as if fully set forth herein, the allegations of the preceding paragraphs, as set forth above.
 - 148. Sony infringes at least Claim 1 of the '777 Patent in violation of 35 U.S.C. § 271(a).
- 149. Sony's infringement is based upon literal infringement or, in the alternative, infringement under the doctrine of equivalents.

- 150. Sony's infringement includes, making, using, advertising, importing, selling, and offering for sale PlayStation 4 consoles, PlayStation Network services, and video games developed by Sony and its subsidiaries (collectively, the "'777 Accused Products"). Sony's acts of making, using, marketing, importing, selling, and offering for sale the '777 Accused Products were and are without the permission, consent, authorization, or license of Bot M8.
- 151. The '777 Accused Products practice the patented invention of the '777 Patent and infringe the '777 Patent because they use the claimed system for controlling allied characters in a video game. Sony's PlayStation 4 is a gaming machine which allows a player to enter an action command for an ally character to proceed in a game. Various Sony video games, such as Uncharted 4, allow a player to control allied characters.
- 152. When the PlayStation 4 is used to play a game, image data and audio data are read from the optical disk, hard drive or external storage device of the PlayStation 4 console in response to the executed gaming program. The image data are sent to the image processing section and the audio data is sent to the audio processing section. Character's individual skills are loaded into RAM and are changed in response to the arm, protector, item, etc., with which the character is equipped. Skills can also change in response to spells or items used by the character. The CPU for loading the character individual skill table into the RAM corresponds to character parameter storage section for storing the skill parameters and the possessed item parameters for each character. The internal hard drive in which the character individual skill table is stored also corresponds to character parameter storage section in which the skill parameters and the possessed item parameters are stored for each character.
- 153. During gameplay, the display shows a plurality of characters including at least the one ally character and at least one enemy character in the form of a Heads-Up Display or other

interactive display used to give commands. The gaming program causes the computer to function as character parameter storage section for storing skill parameters and possessed item parameters for each of the plurality of characters and the execution order calculation section for calculating the execution order of actions of all the characters based on the skill parameters and the possessed item parameters stored by the character parameter storage section.

- 154. "Uncharted 4" is a multiplayer multi character game made by Naughty Dog, Inc., a subsidiary of Sony Interactive Entertainment.
- 155. As shown below, Uncharted 4 includes loadouts which allow different Side Kicks to be summoned and equipped during a multiplayer match in order to assist the character's ally team during the match.

LOADOUTS



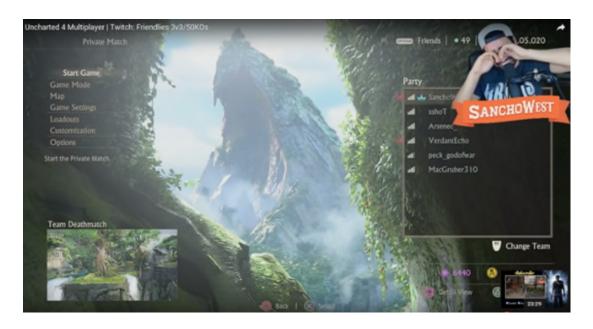
http://www.polygon.com/2016/5/27/11802302/uncharted-4-multiplayer-guide

156. As shown below, a loadout display or Head Up Display is activated on the screen where a Side Kick can be summoned. Additionally, the display in the upper left hand corner will show the ally and enemy characters' battle and includes the score for the game progress.



https://www.youtube.com/watch?v=Zpms1N9H_kI

157. The software code determines the turn order of the ally characters for making combination attacks. When the action of an ally character is executed in response to the player's entry of an operation through the operation unit and when a predetermined combination condition for a different ally character from the ally character whose action is executed is satisfied, the action execution section executes the action of the ally character and executes the action of the enemy character.



https://www.youtube.com/watch?v=N4hm7NarAWc

158. Various games allow the player to enter action commands for an ally character. To make the game more entertaining, even if the predetermined combination condition were assigned to the main ally character and another ally character, another ally character can start acting on its own, i.e. without following the execution order calculated by the execution order calculation. For example, if a Side Kick was summoned to heal ally characters, the Side Kick may nevertheless take cover and shoot at the enemy without being given that command if attacked by an enemy. As shown below, the medic Side Kick is taking cover and shooting without being given that command.



https://www.youtube.com/watch?v=Zpms1N9H_kI

- 159. To the extent the '777 Accused Products include hardware or software owned by third parties, the '777 Accused Products still infringe the '777 Patent because Sony is vicariously liable for making, selling, offering for sale, and/or using the patented technology by controlling the design and operation of the Accused Products that are made, used and sold. For example, pursuant to contractual license agreements, Sony directs and controls its customers' use of the Accused Products. Further, Sony derives a benefit from the manufacture and use of every component of the entire system.
- 160. Sony's infringement of the '777 Patent injured and is injuring Bot M8 in an amount to be proven at trial, but not less than a reasonable royalty.

COUNT XII

(Indirect Infringement of the '777 Patent pursuant to 35 U.S.C. § 271(b))

- 161. Bot M8 repeats, realleges, and incorporates by reference, as if fully set forth herein, the allegations of the preceding paragraphs, as set forth above.
- 162. In addition to directly infringing the '777 Patent, Sony induces infringement under 35 U.S.C. § 271(b) by directing and controlling its customers to use the '777 Accused Proudcts in an infringing manner.
- 163. Customers may not use the PlayStation 4 console, PlayStation Network, or video games without agreeing to various Sony contracts. These contracts provide that Sony owns all intellectual property in the Accused Products, that Sony owns the software operating the Accused Products, that customers may only use the Accused Products as provided for and directed by Sony, and that customers may not modify the Accused Products or use them other than as intended by Sony.
- 164. The following is an excerpt from the PlayStation 4 license. It confirms that Sony owns the PlayStation and the customer is only licensing the ability to use Sony's system. It also provides that the customer may not modify the PlayStation, and that Sony may modify the PlayStation's software without the consent of the user:

All rights to use System Software are granted by license only, and you are not granted any ownership rights or interests in System Software. SIE Inc and its licensors retain all intellectual property rights in System Software. All use of or access to System Software is subject to this Agreement's terms and applicable intellectual property laws. Except as this Agreement expressly grants, SIE Inc and its licensors reserve all rights in System Software.

2. RESTRICTIONS

You may not lease, rent, sublicense, publish, modify, patch, adapt or translate System Software. You may not reverse engineer, decompile or disassemble System Software, create System Software derivative works, or attempt to create System Software

source code from its object code. You may not (i) use any unauthorized, illegal, counterfeit or modified hardware or software with System Software; (ii) use tools to bypass, disable or circumvent any PS4 system encryption, security or authentication mechanism; (iii) reinstall earlier versions of the System Software ("downgrading"); (iv) violate any laws, regulations or statutes or rights of SIE Inc or third parties in connection with your access to or use of System Software; (v) use any hardware or software to cause System Software to accept or use unauthorized, illegal or pirated software or hardware; (vi) obtain System Software in any manner other than through SIE Inc's authorized distribution methods; or (vii) exploit System Software in any manner other than to use it with your PS4 system according to the accompanying documentation and with authorized software or hardware, including use of System Software to design, develop, update or distribute unauthorized software or hardware for use in connection with your PS4 system.

These restrictions will be construed to apply to the greatest extent permitted by the law in your jurisdiction.

3. SERVICES AND UPDATES; THIRD PARTY AGREEMENTS AND CONTENT

SIE Inc may provide you with certain System Software updates, upgrades or services. Some updates, upgrades or services may be provided automatically without notice to you when you sign in to PlayStationTMNetwork and others may be available to you through SIE Inc's website or authorized channels. You consent to SIE Inc providing you these automatic updates, upgrades and services. Services may include the latest update or download of a new release of System Software containing security patches, new technology or revised settings and features that may prevent access to unauthorized or pirated content or prevent use of unauthorized hardware or software in connection with your PS4 system. These updates, upgrades and services may have effects on the functionality of your PS4 system, and SIE Inc is not responsible to you for any such effects or any harm caused by the installation process.

You must install or have installed the most current version of System Software as soon as you reasonably can. Some updates, upgrades or services may change your current settings, cause a loss of data or content or cause functionality or feature loss. SIE Inc recommends that you regularly back up all data that you can.

https://doc.dl.playstation.net/doc/ps4-eula/ps4_eula_en.html.

165. The following is an excerpt from the PlayStation Network license:

Except as stated in this agreement, all content and software provided through PSN Services are licensed non-exclusively and revocably to you for your personal, private, non-transferable, non-commercial, limited use on a limited number of devices in the country in which your Account is registered. All intellectual property rights subsisting in PSN Services, including all software, data, and content subsisting in or used in connection with PSN Services, the Online ID and access to content and hardware used in connection with PSN Services (collectively defined as "Property"), belong to SIE LLC, its affiliates and its licensors. This license and all use or access to Property is expressly conditioned on your compliance with this agreement's terms, applicable Usage Terms, other applicable agreements, if any, and all applicable copyright and intellectual property rights laws.

https://www.playstation.com/en-us/network/legal/terms-of-service/.

166. Sony knowingly and actively aided and abetted the direct infringement of the '777 Patent by instructing and encouraging its customers and developers to use the '777 Accused Products. Such instructions and encouragement included advising third parties to use the '777 Accused Products in an infringing manner, providing a mechanism through which third parties may infringe the '777 Patent, advertising and promoting the use of the '777 Accused Products in an infringing manner, and distributing guidelines and instructions to third parties on how to use the '777 Accused Products in an infringing manner.

PRAYER FOR RELIEF

WHEREFORE, Bot M8 prays for judgment and relief as follows:

- A. an entry of judgment holding that Sony infringed, is infringing, induced, and is inducing infringement of the Asserted Patents;
- B. a preliminary and permanent injunction against Sony and its officers, employees, agents, servants, attorneys, instrumentalities, and those in privity with them, from infringing and inducing infringement of the Asserted Patents, and for all further and proper injunctive relief pursuant to 35 U.S.C. § 283;

- C. an award to Bot M8 of such past damages, not less than a reasonable royalty, as it shall prove at trial against Sony that is adequate to fully compensate Bot M8 for Sony's infringement of the Asserted Patents;
- D. a determination that Sony's infringement has been willful, wanton, and deliberate and that the damages against it be increased up to treble on this basis or for any other basis in accordance with the law;
- E. a finding that this case is "exceptional" and an award to Bot M8 of its costs and reasonable attorneys' fees, as provided by 35 U.S.C. § 285;
- F. an accounting of all infringing sales and revenues, together with post-judgment interest and pre-judgment interest from the first date of infringement of the Asserted Patents; and
 - G. such further and other relief as the Court may deem proper and just.

DEMAND FOR JURY TRIAL

Bot M8 demands a jury trial on all issues so triable.

By: /s/ Paul J. Andre

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Bot M8, LLC

Dated: August 12, 2019