

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION**

**MARKING OBJECT VIRTUALIZATION
INTELLIGENCE, LLC,**

Plaintiff,

v.

**STMICROELECTRONICS, INC. AND
STMICROELECTRONICS N.V.**

Defendants.

Civil Action No. _____

JURY TRIAL DEMANDED

COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff Marking Object Virtualization Intelligence, LLC (“MOV Intelligence” or “Plaintiff”), by and through its attorneys, brings this action and makes the following allegations of patent infringement relating to U.S. Patent Nos.: 6,553,127 (“the ‘127 patent”); 6,802,006 (“the ‘006 patent”); 7,650,504 (“the ‘504 patent”); and 6,931,536 (“the ‘536 patent”) (collectively, the “patents-in-suit” or the “MOV Intelligence Patents”). Defendants STMicroelectronics, Inc. and STMicroelectronics N.V. (collectively, “STMicroelectronics” or “Defendant”) infringe each of the patents-in-suit in violation of the patent laws of the United States of America, 35 U.S.C. § 1 *et seq.*

INTRODUCTION

1. MOV Intelligence and its wholly-owned subsidiary, MOV Global Licensing LLC (“MOV Global Licensing”) pursue the reasonable royalties owed for STMicroelectronics’ unauthorized use of patented groundbreaking technology both here in the United States and throughout Europe.

2. Rovi Corporation (“Rovi”) ¹ is a pioneer and leader in protecting computer technology, including digital rights management (“DRM”) and digital watermarking systems.

¹ On April 29, 2016, Rovi Corporation acquired TiVo, Inc. The combined company operates under the name TiVo, Inc.

Rovi assigned MOV Intelligence rights to over 233 patents including many of John O. Ryan's, the founder of Rovi predecessor Macrovision, groundbreaking patents.²

THE PARTIES

MARKING OBJECT VIRTUALIZATION INTELLIGENCE, LLC

3. Marking Object Virtualization Intelligence, LLC ("MOV Intelligence") is a Texas limited liability company with its principal place of business located at 903 East 18th Street, Suite 217, Plano, Texas 75074. MOV Intelligence is committed to advancing the current state of DRM and watermarking technologies.

4. MOV Intelligence Global Licensing, LLC ("MOV Global Licensing") is a wholly-owned subsidiary of MOV Intelligence and assists in the licensing of MOV Intelligence's patents in territories outside the United States with a focus on the European Union (and the United Kingdom).³ MOV Intelligence Global Licensing, LLC is a corporation organized under the laws of Delaware.

5. Rovi assigned the following patents to MOV Intelligence: U.S. Patent Nos. 7,299,209; 6,510,516; 6,802,006; 7,650,504; 6,813,640; 7,650,418; 7,200,230; 7,124,114; 6,381,367; 6,374,036; 6,360,000; 6,553,127; 6,701,062; 6,594,441; 7,764,790; 8,014,524; 6,931,536; and International Patent Nos. DE60047794; DE60148635.8; DE60211372.5; DE69901231.7-08; DK1047992; EP1047992; EP1303802; EP1332618; EP1444561; ES1047992; FR1047992; FR1303802; FR1332618; FR1444561; GB1047992; GB1303802; GB1332618; GB1444561; GR3040059; IE1047992; IE1444561; IT1047992; NL1047992; NL1444561; PT1047992; and SE1047992.

6. MOV Intelligence has the right to sublicense the following international patent assets held by Rovi: AT1020077; AT1198959; AT1080584; ATE232346; AT1020077;

² See U.S. Patent Nos. 6,381,367; 7,764,790; 6,701,062; 8,014,524; German Patent Nos. DE60001837 and DE60001837D1; Chinese Patent No. CN1186941C; Canadian Patent No. CA2379992C; European Patent No. EP1198959B1; and Japanese Patent No. JP4387627B2.

³ Wolfram Schrag, *EU-Patent steht auf der Kippe*, BR.COM NACHRICHTEN (August 2016).

AU729762; AU741281; AU753421; AU743639; AU714103; AU729762; AU2002351508;
AU765747; AU2000263715; BE1020077; BE1198959; BE1020077; BE1080584; BE900498;
BRPI 9812908-2; BR9709332.7; BRPI 9812908-2; CA2305254; CA2332546; CA2379992;
CA2305254; CA2332548; CA2557859; CA2252726; CA2462679; CA2315212; CA2416304;
CA2425115; CH1020077; CH1080584; CH900498; CH1020077; CH1047992;
CNZL98809610.2; CNZL99806376.2; CNZL00811179.0; CNZL98809610.2;
CNZL99806377.0; CNZL97194746.5; CNZL02820738.6; CNZL99802008.7;
CNZL00819775.X; CNZL200510089437; DE69807102.608; DE60001837.7; DE69908352.4-
08; DE69718907.4-08; DE69807102.608; DK1020077; DK1080584; DK1198959; DK1020077;
DK900498; EP1020077; EP1198959; EP1080584; EP900498; EP1020077; ES1020077;
ES1198959; ES1080584; ESES2191844; ES1020077; FI1020077; FI1080584; FI1020077;
FI900498; FR1020077; FR1198959; FR1080584; FR900498; FR1020077; GB1020077;
GB1198959; GB1080584; GB900498; GB1020077; GR3041381; GR3045620; GR3043304;
GR3041381; HK1028696; HKHK1035625; HK1028696; HK1035282; HK1018562;
HKHK1069234; HKHK1057115; HK1083653B; IE1020077; IE1198959; IE1020077;
IE1080584; IE900498; IL135498; IL139543; IL148002; IL135498; IL139544; IN201442;
IN220504; IN201442; IN207829; IT1020077; IT1080584; IT900498; IT1020077; JP4139560;
JP4263706; JP4387627; JP4551617; JP4139560; JP4263706; JP3542557; JP4627809;
JP4698925; JP4366037; JP4307069; KR374920; KR422997; KR761230; KR374920;
KR362801; KR478072; KR689648; KR539987; KR752067; KR728517; KR593239;
MX223464; MX231725; MX226464; MX223464; MX212991; MX214637; MX237690;
MX240845; MYMY-123159-A; MYMY-123159-A; NL1020077; NL1198959; NL1080584;
NL900498; NL1020077; NZ503280; NZ507789; NZ503280; NZ532122; PT1010077;
PT1198959; PT1080584; PT900498; PT1010077; RU2195084; RU2216121; RU2251821;
RU2195084; RU2208301; RU2258252; SE1020077; SE1198959; SE1080584; SE900498;
SE1020077; SG71485; SG76965; SG86547; SG76964; SG71485; TWNI117461; TWNI-

124303; TWNI-130428; TWNI1600674; TWNI-162661; TWNI-202640; TWNI117461; TWNI-130754; and TWNI-184111.

STMICROELECTRONICS

7. On information and belief, STMicroelectronics, Inc. is a Delaware corporation with its principal place of business located at 750 Canyon Drive, Suite 300, Coppell, Texas 75019. STMicroelectronics, Inc. is registered to do business in the State of Texas and may be served with process through its registered agent, CT Corp System, 1999 Bryan St., Suite 900, Dallas, Texas 75201-3136. On information and belief, STMicroelectronics, Inc. conducts business operations within the Eastern District of Texas through its facilities in Coppell, Texas.

8. On information and belief, STMicroelectronics N.V. is a foreign corporation with headquarters located at 39 Chemin du Champ des Filles Plan-Les-Quates, Geneva 1118BH Switzerland. STMicroelectronics N.V. does business in Texas, directly or through its wholly-owned subsidiaries.

JURISDICTION AND VENUE

9. This action arises under the patent laws of the United States, Title 35 of the United States Code. Accordingly, this Court has exclusive subject matter jurisdiction over this action under 28 U.S.C. §§ 1331 and 1338(a).

10. Upon information and belief, this Court has personal jurisdiction over STMicroelectronics in this action because STMicroelectronics has committed acts within the Eastern District of Texas giving rise to this action and has established minimum contacts with this forum such that the exercise of jurisdiction over STMicroelectronics would not offend traditional notions of fair play and substantial justice. STMicroelectronics, directly and/or through subsidiaries or intermediaries (including distributors, retailers, and others), has committed and continues to commit acts of infringement in this District by, among other things, offering to sell and selling products and/or services that infringe the patents-in-suit. In addition, Defendant STMicroelectronics is registered to do business in the State of Texas.

11. Venue is proper in this district under 28 U.S.C. §§ 1391(b)-(d) and 1400(b). STMicroelectronics is registered to do business in Texas, and upon information and belief, has transacted business in the Eastern District of Texas and has committed acts of direct and indirect infringement in the Eastern District of Texas.

MOV INTELLIGENCE’S LANDMARK INVENTIONS

12. The groundbreaking inventions in DRM and digital watermarking taught in the patents-in-suit were pioneered by Rovi. Rovi, established in 1983 under the name Macrovision, was a trailblazing technology company focused on inventing and bringing to market fundamental technologies designed to allow producers and distributors of film and music to widely distribute their products while simultaneously protecting their art from unauthorized copying.⁴ Macrovision’s copy protection technology became so important to content creators that Congress specifically regulated the manufacture and sale of technology that was incompatible with Macrovision’s copy protection technology. *See* 17 U.S.C. § 1201(k)(1) (“unless such recorder conforms to the automatic gain control copy control technology”).⁵ Rovi broadened its focus to include copy protection and DRM for other media,⁶ including computer executables, firmware, operating system images, watermarking, and encryption.

⁴ Aljean Harmetz, *Cotton Club Cassettes Coded to Foil Pirates*, N.Y. TIMES (April 24, 1985).

⁵ *See also* David Nimmer, *Back from the Future: A Proleptic Review of the Digital Millennium Copyright Act*, 16 BERKELEY TECH. L.J. 855, 862 (2001) (The DMCA “contains a welter of corporation-specific features, relating to Macrovision Corp. The features in question relate to section 1201’s controls on consumer analog devices.”) (citations omitted).

⁶ *See* Michael Arnold et al., TECHNIQUES AND APPLICATIONS OF DIGITAL WATERMARKING AND CONTENT PROTECTION 203 (2002) (Describing Rovi’s Cactus Data Shield product which by 2002 had been used in over 100 million compact discs. “This scheme [Rovi Cactus Data Shield] operates by inserting illegal data values instead of error-correcting codes.”); *see also* Rovi *SafeDisc Copy Protection Overview*, MACROVISION CORPORATION DATASHEET at 2 (1999) (“SafeDisc incorporates a unique authentication technology that prevents the re-mastering of CD-ROM titles and deters attempts to make unauthorized copies. The SafeDisc authentication process ensures that consumers will only be able to play original discs. The user is forced to purchase a legitimate copy.”); Kirby Kish, MACROSAFE SYSTEM: A SOLUTION FOR SECURE DIGITAL MEDIA DISTRIBUTION at 7 (January 2002) (showing the architecture of the MacroSafe system and use of a DRM Server and Key Escrow Server).

13. MOV Intelligence's patent portfolio, which includes more than 233 issued patents worldwide, is a direct result of Rovi's substantial investment in research and development. The asserted MOV Intelligence patents are reflective of this history of innovation, embodying a number of firsts in the development of DRM and watermarking technologies.

14. MOV Intelligence long-term financial success depends in part on its ability to establish, maintain, and protect its proprietary technology through patents. Defendant's infringement presents significant and ongoing damage to MOV Intelligence's business. STMicroelectronics, in an effort to expand its product base and profit from the sale of patented technology, has chosen to incorporate MOV Intelligence's fundamental technology without a license or payment.

THE ASSERTED PATENTS

U.S. PATENT NO. 6,553,127

15. U.S. Patent No. 6,553,127 (the "'127 patent"), entitled "Method and Apparatus for Selective Block Processing," was filed on November 18, 1998, and claims priority to May 20, 1998. MOV Intelligence is the owner by assignment of the '127 patent. A true and correct copy of the '127 patent is attached hereto as Exhibit A. The '127 patent claims specific methods and systems for embedding and detecting a watermark in a data stream.

16. The '127 patent has been cited by over 140 issued United States patents and published patent applications as relevant prior art. Specifically, patents issued to the following companies have cited the '127 patent as relevant prior art:

- Koninklijke Philips Electronics N.V.
- Verance Corporation
- Digimarc Corporation
- Microsoft Corporation
- Oki Electric Industry Co., Ltd.
- Matsushita Electric Industrial Co., Ltd.
- Hitachi, Ltd.
- Sony Corporation
- Canon Kabushiki Kaisha
- NEC Corporation

- Arbitron, Inc.
- Civolution B.V.
- General Instrument Corporation
- Sandisk Technologies, Inc.
- Marvell International Technology, Ltd.
- Fujitsu Limited
- Thomson Licensing, LLC
- Mediatek, Inc.
- Hewlett-Packard Development Company, L.P.

17. The '127 patent claims a technical solution to a problem unique to the transmission of digital information over a network: reliably embedding and detecting watermarks or other similar hidden messages or symbols in digital data streams.

U.S. PATENT NO. 6,802,006

18. U.S. Patent No. 6,802,006 (the "'006 patent"), entitled "System and Method of Verifying the Authenticity of Dynamically Connectable Executable Images," was filed on July 22, 1999, and claims priority to January 15, 1999. MOV Intelligence is the owner by assignment of the '006 patent. A true and correct copy of the '006 patent is attached hereto as Exhibit B. The '006 patent claims specific methods and systems for verifying the authenticity of executable images. The system includes a validator that determines a reference digital signature for an executable image using the contents of the executable image excluding those portions of the executable that are fixed-up by a program loader. The validator then, subsequent to the loading of the executable image, determines an authenticity digital signature to verify that the executable image has not been improperly modified.

19. The '006 patent has been cited by over 85 issued United States patents and published patent applications as relevant prior art. Specifically, patents issued to the following companies have cited the '006 patent as relevant prior art:

- Intertrust Technologies Corporation
- International Business Machines Corporation
- Intel Corporation
- Microsoft Corporation
- Check Point Software Technologies, Inc.
- Nokia Corporation

- Ipass, Inc.
- NyteLL Software LLC
- Amazon Technologies, Inc.
- Panasonic Corporation
- Matsushita Electric Ind. Co. Ltd.
- NXP B.V. (now Cisco Systems, Inc.)
- Intel Corporation
- Hewlett-Packard Development Company, L.P.
- Apple, Inc.
- Lockheed Martin Corporation
- Symantec Corporation
- Zone Labs, Inc.

20. The '006 patent claims a technical solution to a problem unique to computer systems: verifying and authenticating executable images.

U.S. PATENT NO. 7,650,504

21. U.S. Patent No. 7,650,504 (the “‘504 patent”), entitled “System and Method of Verifying the Authenticity of Dynamically Connectable Executable Images,” was filed on August 23, 2004, and claims priority to July 22, 1999. MOV Intelligence is the owner by assignment of the ‘504 patent. A true and correct copy of the ‘504 patent is attached hereto as Exhibit C. The ‘504 patent claims specific methods and systems for verifying the authenticity of executable images. The systems and methods taught in the ‘504 patent incorporate a validator that determines a reference digital signature for an executable image using the contents of the executable image excluding those portions of the executable that are fixed-up by a program loader. The validator then, subsequent to the loading of the executable image, determines an authenticity digital signature to verify that the executable image has not been improperly modified. In addition, the validator ensures that each of the pointers in the executable image have not been improperly redirected.

22. The ‘504 patent and its underlying application have been cited by over 30 issued United States patents and published patent applications as relevant prior art. Specifically, patents issued to the following companies have cited the ‘504 patent as relevant prior art:

- Qualcomm Incorporated
- Intel Corporation

- Micro Beef Technologies, Ltd
- Microsoft Corporation
- Apple, Inc.
- Symantec Corporation
- Samsung Electronics Co., Ltd.
- Cybersoft Technologies, Inc.
- Electronics and Telecommunications Research Institute (ETRI)

23. The '504 patent claims a technical solution to a problem unique to the transmission of digital information over a network: verifying the identity of a software application in a dynamic loading environment. In particular, the system determines whether a software application that has been dynamically connected to another data object has been tampered with subsequent to the execution of the software application.

U.S. PATENT NO. 6,931,536

24. U.S. Patent No. 6,931,536 (the "'536 patent'"), entitled "Enhanced Copy Protection of Proprietary Material Employing Multiple Watermarks," was filed on March 6, 2001. MOV Intelligence is the owner by assignment of the '536 patent. A true and correct copy of the '536 patent is attached hereto as Exhibit D. The '536 patent claims specific methods and systems for distributing proprietary material with enhanced copy and play protection. The '536 patent teaches the use of multiple watermarks for enhanced copy protection. The first watermark is to be processed by programmable devices and non-programmable devices that are configured to process the first watermark for copy protection of the proprietary material. The '536 patent also teaches embedding a second watermark in the digital content material. The second watermark is processed by non-programmable devices configured to process the second watermark for copy protection of the proprietary material in the event that the first watermark is not detected.

25. The '536 patent has been cited by over 120 issued United States patents and published patent applications as relevant prior art. Specifically, patents issued to the following companies have cited the '536 patent as relevant prior art:

- Sanyo Electric Co. Ltd.
- Koninklijke Philips Electronics N.V.

- Verance Corporation
- Digimarc Corporation
- Adobe Systems Incorporated
- Sony Corporation
- Panasonic Corporation
- Interdigital Technology Corporation
- Victor Co of Japan Ltd.
- Primax Electronics Ltd.
- Kabushiki Kaisha Toshiba
- Seiko Epson Corporation

26. The '536 patent claims a technical solution to a problem unique to the transmission of digital information over a network: providing a method and apparatus for distributing proprietary material with enhanced copy and play protection using multiple embedded watermarks.

COUNT I
INFRINGEMENT OF U.S. PATENT NO. 6,553,127

27. MOV Intelligence references and incorporates by reference the preceding paragraphs of this Complaint as if fully set forth herein.

28. STMicroelectronics designs, makes, uses, sells, and/or offers for sale in the United States products and/or services for digital rights management.

29. STMicroelectronics designs, makes, sells, offers to sell, imports, and/or uses system-on-chip ("SoC") products that provide solutions for premium, high-quality, UHD client and server set-top boxes. The infringing SoC products include by way of example: STiH314, STiH318, STiH412, STiH414, and STiH418 (the "STMicroelectronics '127 Product(s)").

30. On information and belief, one or more STMicroelectronics subsidiaries and/or affiliates use the STMicroelectronics '127 Products in regular business operations.

31. On information and belief, one or more of the STMicroelectronics '127 Products include watermarking technology.

32. On information and belief, one or more of the STMicroelectronics '127 Products enable detecting a watermark embedded in selected blocks of a watermarked data stream having a plurality of data elements.

33. On information and belief, the STMicroelectronics '127 Products are available to businesses and individuals throughout the United States.

34. On information and belief, the STMicroelectronics '127 Products are provided to businesses and individuals located in the Eastern District of Texas.

35. On information and belief, the STMicroelectronics '127 Products enable the detection or placement of a watermark in a data stream.

36. On information and belief, the STMicroelectronics '127 Products comprise a system wherein the watermark is placed in a data stream based on a texture criterion that measures a variation of a selected characteristic associated with each data element of the watermarked data stream. For example, on information and belief, the STMicroelectronics comprises a communication interface to, and is configured to divide the watermarked data stream into a plurality of equally sized blocks as chosen arbitrarily in the embedding process.

37. On information and belief, the STMicroelectronics '127 Products enable selecting only the blocks that meet substantially similar texture criterion as that used in selecting the blocks for embedding the watermark.

38. On information and belief, the STMicroelectronics '127 Products enable detecting the watermark only in the blocks that were embedded with the watermark and were selected by the selecting step thereby decreasing the time and number of operations necessary to process a given number of blocks.

39. On information and belief, the STMicroelectronics '127 Products enable the placement of a watermark in a data stream wherein the data stream is a video stream.

40. On information and belief, the STMicroelectronics '127 Products enable embedding a watermark in blocks that meet substantially similar textual criteria.

41. On information and belief, the STMicroelectronics '127 Products contain functionality for embedding a watermark only in portions of the data stream whose spectral energy exceeds a predetermined threshold according to a texture criterion, to create a watermarked data stream.

42. On information and belief, the STMicroelectronics '127 Products enable the detection of a watermark.

43. On information and belief, the STMicroelectronics '127 Products enable dividing a data stream into the selected blocks of substantially similar texture criterion.

44. On information and belief, one or more of the STMicroelectronics '127 Products enable selecting a block of content from a data stream.

45. On information and belief, STMicroelectronics has directly infringed and continues to directly infringe the '127 patent by, among other things, making, using, offering for sale, and/or selling digital content protection technology, including but not limited to the STMicroelectronics '127 Products, which include infringing watermarking technologies. Such products and/or services include, by way of example and without limitation, the STiH314, STiH318, STiH412, STiH414, and STiH418 SoC products.

46. By making, using, testing, offering for sale, and/or selling watermarking products and services, including but not limited to the STMicroelectronics '127 Products, STMicroelectronics has injured MOV Intelligence and is liable to MOV Intelligence for directly infringing one or more claims of the '127 patent, including at least claim 10, pursuant to 35 U.S.C. § 271(a).

47. On information and belief, STMicroelectronics also indirectly infringes the '127 patent by actively inducing infringement under 35 USC § 271(b).

48. On information and belief, STMicroelectronics had knowledge of the '127 patent since at least service of this Complaint or shortly thereafter, and on information and belief, STMicroelectronics knew of the '127 patent and knew of its infringement, including by way of this lawsuit.

49. On information and belief, STMicroelectronics intended to induce patent infringement by third-party customers and users of the STMicroelectronics '127 Products and had knowledge that the inducing acts would cause infringement or was willfully blind to the possibility that its inducing acts would cause infringement. STMicroelectronics specifically intended and was aware that the normal and customary use of the accused products would infringe the '127 patent. STMicroelectronics performed the acts that constitute induced infringement, and would induce actual infringement, with knowledge of the '127 patent and with the knowledge that the induced acts would constitute infringement. For example, STMicroelectronics provides the STMicroelectronics '127 Products that have the capability of operating in a manner that infringe one or more of the claims of the '127 patent, including at least claim 10, and STMicroelectronics further provides documentation and training materials that cause customers and end users of the STMicroelectronics '127 Products to utilize the products in a manner that directly infringe one or more claims of the '127 patent. By providing instruction and training to customers and end-users on how to use the STMicroelectronics '127 Products in a manner that directly infringes one or more claims of the '127 patent, including at least claim 10, STMicroelectronics specifically intended to induce infringement of the '127 patent. On information and belief, STMicroelectronics engaged in such inducement to promote the sales of the STMicroelectronics '127 Products, e.g., through STMicroelectronics user manuals, product support, marketing materials, and training materials to actively induce the users of the accused products to infringe the '127 patent. Accordingly, STMicroelectronics has induced and continues to induce users of the accused products to use the accused products in their ordinary and customary way to infringe the '127 patent, knowing that such use constitutes infringement of the '127 patent.

50. The '127 patent is well-known within the industry as demonstrated by the over 140 citations to the '127 patent in published patents and patent applications assigned to technology companies and academic institutions. Several of STMicroelectronics' competitors have paid considerable licensing fees for their use of the technology claimed by the '127 patent.

In an effort to gain an advantage over STMicroelectronics' competitors by utilizing the same licensed technology without paying reasonable royalties, STMicroelectronics infringed the '127 patent in a manner best described as willful, wanton, malicious, in bad faith, deliberate, consciously wrongful, flagrant, or characteristic of a pirate.

51. To the extent applicable, the requirements of 35 U.S.C. § 287(a) have been met with respect to the '127 patent.

52. As a result of STMicroelectronics' infringement of the '127 patent, MOV Intelligence has suffered monetary damages, and seeks recovery in an amount adequate to compensate for STMicroelectronics' infringement, but in no event less than a reasonable royalty for the use made of the invention by STMicroelectronics together with interest and costs as fixed by the Court.

COUNT II
INFRINGEMENT OF U.S. PATENT NO. 6,802,006

53. MOV Intelligence references and incorporates by reference the preceding paragraphs of this Complaint as if fully set forth herein.

54. STMicroelectronics designs, makes, uses, sells, and/or offers for sale in the United States products and/or services for determining the authenticity of an executable image.

55. STMicroelectronics designs, makes, sells, offers to sell, imports, and/or uses the STM32 family of 32-bit microcontrollers, including microcontrollers with part numbers: STM32F401, STM32F410, STM32F411, STM32F412, STM32F427, STM32F429, STM32F469, and STM32F479 (the "STMicroelectronics '006 Product(s)").

56. On information and belief, one or more STMicroelectronics subsidiaries and/or affiliates use the STMicroelectronics '006 Products in regular business operations.

57. On information and belief, one or more of the STMicroelectronics '006 Products include authentication technology.

58. On information and belief, one or more of the STMicroelectronics '006 Products enable authenticating the identity of a software application in a dynamic loading environment.

In particular, the STMicroelectronics '006 Products determine whether an executable image has been dynamically connected to another data object that has been tampered with subsequent to the execution of the software application.

59. On information and belief, the STMicroelectronics '006 Products are available to businesses and individuals throughout the United States.

60. On information and belief, the STMicroelectronics '006 Products are provided to businesses and individuals located in the Eastern District of Texas.

61. On information and belief, the STMicroelectronics '006 Products enable identifying one or more locations within the executable image, each of the identified locations being modified by a program loader.

62. On information and belief, the STMicroelectronics '006 Products comprise a system wherein a reference digital signature is generated based on an executable image.

63. On information and belief, the STMicroelectronics '006 Products generate a reference digital signature that excludes one or more locations in an executable image.

64. On information and belief, the STMicroelectronics '006 Products are capable of storing the reference digital signature on a computer network.

65. On information and belief, the STMicroelectronics '006 Products comprise systems and methods wherein an authenticity digital signature is generated based on an executable image.

66. On information and belief, the STMicroelectronics '006 Products comprise systems and methods that generate an authenticity digital signature that excludes one or more locations in an executable image.

67. On information and belief, the STMicroelectronics '006 Products comprise systems and methods that determine whether the authenticity digital signature matches the reference digital signature.

68. On information and belief, the STMicroelectronics '006 Products contain functionality that generates a warning if the reference digital signature does not match the authenticity digital signature.

69. On information and belief, the STMicroelectronics '006 Products contain functionality wherein the digital signature is generated based on a first and second point in time. For example, one or more of the STMicroelectronics '006 Products generate a reference digital signature at a first point in time. Subsequently, an authenticity digital signature is generated (at a second point in time).

70. On information and belief, the STMicroelectronics '006 Products comprise a system and method that generates a digital signature based on a hash value. Specifically, the reference digital signature that is generated by the STMicroelectronics '006 Products at a first point in time is based on a hash value. Later the authenticity digital signature is also generated based on a hash function that is used to check data integrity.

71. On information and belief, the STMicroelectronics '006 Products comprise a system and method that can verify the identity a computer application.

72. On information and belief, the STMicroelectronics '006 Products enable the detection of corrupted data in a computer image.

73. On information and belief, the STMicroelectronics '006 Products enable the verification of the integrity of software images.

74. On information and belief, STMicroelectronics has directly infringed and continues to directly infringe the '006 patent by, among other things, making, using, offering for sale, and/or selling content protection technology, including but not limited to the STMicroelectronics '006 Products, which includes technology for verifying the authenticity of a software image. Such products and/or services include, by way of example and without limitation, the STM32F401, STM32F410, STM32F411, STM32F412, STM32F427, STM32F429, STM32F469, and STM32F479 Products.

75. By making, using, testing, offering for sale, and/or selling verification and authentication products and services, including but not limited to the STMicroelectronics '006 Products, STMicroelectronics has injured MOV Intelligence and is liable to MOV Intelligence for directly infringing one or more claims of the '006 patent, including at least claims 1, 3, 14, and 15, pursuant to 35 U.S.C. § 271(a).

76. On information and belief, STMicroelectronics also indirectly infringes the '006 patent by actively inducing infringement under 35 USC § 271(b).

77. On information and belief, STMicroelectronics had knowledge of the '006 patent since at least service of this Complaint or shortly thereafter, and on information and belief, STMicroelectronics knew of the '006 patent and knew of its infringement, including by way of this lawsuit.

78. On information and belief, STMicroelectronics intended to induce patent infringement by third-party customers and users of the STMicroelectronics '006 Products and had knowledge that the inducing acts would cause infringement or was willfully blind to the possibility that its inducing acts would cause infringement. STMicroelectronics specifically intended and was aware that the normal and customary use of the accused products would infringe the '006 patent. STMicroelectronics performed the acts that constitute induced infringement, and would induce actual infringement, with knowledge of the '006 patent and with the knowledge that the induced acts would constitute infringement. For example, STMicroelectronics provides the STMicroelectronics '006 Products that have the capability of operating in a manner that infringe one or more of the claims of the '006 patent, including at least claims 1, 3, 14, and 15, and STMicroelectronics further provides documentation and training materials that cause customers and end users of the STMicroelectronics '006 Products to utilize the products in a manner that directly infringe one or more claims of the '006 patent. By providing instruction and training to customers and end-users on how to use the STMicroelectronics '006 Products in a manner that directly infringes one or more claims of the '006 patent, including at least claims 1, 3, 14, and 15, STMicroelectronics specifically intended

to induce infringement of the '006 patent. On information and belief, STMicroelectronics engaged in such inducement to promote the sales of the STMicroelectronics '006 Products, e.g., through STMicroelectronics user manuals, product support, marketing materials, and training materials to actively induce the users of the accused products to infringe the '006 patent. Accordingly, STMicroelectronics has induced and continues to induce users of the accused products to use the accused products in their ordinary and customary way to infringe the '006 patent, knowing that such use constitutes infringement of the '006 patent.

79. The '006 patent is well-known within the industry as demonstrated by the over 85 citations to the '006 patent in issued patents and published patent applications assigned to technology companies and academic institutions. Several of STMicroelectronics' competitors have paid considerable licensing fees for their use of the technology claimed by the '006 patent. In an effort to gain an advantage over STMicroelectronics' competitors by utilizing the same licensed technology without paying reasonable royalties, STMicroelectronics infringed the '006 patent in a manner best described as willful, wanton, malicious, in bad faith, deliberate, consciously wrongful, flagrant, or characteristic of a pirate.

80. To the extent applicable, the requirements of 35 U.S.C. § 287(a) have been met with respect to the '006 patent.

81. As a result of STMicroelectronics' infringement of the '006 patent, MOV Intelligence has suffered monetary damages, and seeks recovery in an amount adequate to compensate for STMicroelectronics' infringement, but in no event less than a reasonable royalty for the use made of the invention by STMicroelectronics together with interest and costs as fixed by the Court.

COUNT III
INFRINGEMENT OF U.S. PATENT NO. 7,650,504

82. MOV Intelligence references and incorporates by reference the preceding paragraphs of this Complaint as if fully set forth herein.

83. STMicroelectronics designs, makes, uses, sells, and/or offers for sale in the United States products and/or services for verifying the authenticity of executable images.

84. STMicroelectronics designs, makes, sells, offers to sell, imports, and/or uses the STM32 family of 32-bit microcontrollers, including part numbers: STM32F401, STM32F410, STM32F411, STM32F412, STM32F427, STM32F429, STM32F469, and STM32F479 (the “STMicroelectronics ‘504 Product(s)”).

85. On information and belief, one or more STMicroelectronics subsidiaries and/or affiliates use the STMicroelectronics ‘504 Products in regular business operations.

86. On information and belief, one or more of the STMicroelectronics ‘504 Products include authentication technology.

87. On information and belief, one or more of the STMicroelectronics ‘504 Products comprise systems and methods for determining the authenticity of an executable image.

88. On information and belief, one or more of the STMicroelectronics ‘504 Products enable authenticating and verifying an executable image. In particular, the STMicroelectronics ‘504 Products determine whether a software application that has been dynamically connected to another data object has been tampered with subsequent to the execution of the software application.

89. On information and belief, the STMicroelectronics ‘504 Products are available to businesses and individuals throughout the United States.

90. On information and belief, the STMicroelectronics ‘504 Products are provided to businesses and individuals located in the Eastern District of Texas.

91. On information and belief, the STMicroelectronics ‘504 Products enable the use of a reference digital signature for an executable image. The reference digital signature uses the contents of the executable image excluding portions of the executable that are fixed-up by a program loader.

92. On information and belief, the STMicroelectronics ‘504 Products comprise a system wherein a reference digital signature is generated based on an executable image.

93. On information and belief, the STMicroelectronics '504 Products generate a reference digital signature that excludes one or more locations in an executable image.

94. On information and belief, the STMicroelectronics '504 Products comprise systems and methods wherein subsequent to the loading of the executable image the '504 Products determine an authenticity digital signature to verify that the executable image has not been improperly modified.

95. On information and belief, the STMicroelectronics '504 Products comprise systems and methods that generate an authenticity digital signature that excludes one or more locations in an executable image.

96. On information and belief, the STMicroelectronics '504 Products are systems and methods that generate an authenticity digital signature after the executable image is loaded into memory. The authenticity digital signature which is generated by the STMicroelectronics '504 Products excludes one or more pointers in need of fixing up;

97. On information and belief, the STMicroelectronics '504 Products comprise systems and methods that determine whether the authenticity digital signature matches the reference digital signature.

98. On information and belief, the STMicroelectronics '504 Products enable the generating of a reference digital signature prior to loading the executable image into memory. Specifically, the STMicroelectronics '504 Products generate a reference digital signature that excludes one or more pointers from the reference digital signature.

99. On information and belief, the STMicroelectronics '504 Products contain functionality wherein the digital signature is generated based on a first and second point in time.

100. On information and belief, the STMicroelectronics '504 Products have the ability to compare the reference digital signature and the authenticity digital signature to perform an authenticity check.

101. On information and belief, the STMicroelectronics '504 Products enable the detection of corrupted data in a computer image.

102. On information and belief, the STMicroelectronics '504 Products enable the verification of the integrity of software images.

103. On information and belief, STMicroelectronics has directly infringed and continues to directly infringe the '504 patent by, among other things, making, using, offering for sale, and/or selling content protection technology, including but not limited to the STMicroelectronics '504 Products, which includes technology for verifying the authenticity of a software image. Such products and/or services include, by way of example and without limitation, the STM32F401, STM32F410, STM32F411, STM32F412, STM32F427, STM32F429, STM32F469, and STM32F479 32-bit Flash microcontrollers.

104. By making, using, testing, offering for sale, and/or selling authentication and verification technologies and services, including but not limited to the STMicroelectronics '504 Products, STMicroelectronics has injured MOV Intelligence and is liable to MOV Intelligence for directly infringing one or more claims of the '504 patent, including at least claims 1 and 10, pursuant to 35 U.S.C. § 271(a).

105. On information and belief, STMicroelectronics also indirectly infringes the '504 patent by actively inducing infringement under 35 USC § 271(b).

106. On information and belief, STMicroelectronics had knowledge of the '504 patent since at least service of this Complaint or shortly thereafter, and on information and belief, STMicroelectronics knew of the '504 patent and knew of its infringement, including by way of this lawsuit.

107. On information and belief, STMicroelectronics intended to induce patent infringement by third-party customers and users of the STMicroelectronics '504 Products and had knowledge that the inducing acts would cause infringement or was willfully blind to the possibility that its inducing acts would cause infringement. STMicroelectronics specifically intended and was aware that the normal and customary use of the accused products would infringe the '504 patent. STMicroelectronics performed the acts that constitute induced infringement, and would induce actual infringement, with knowledge of the '504 patent and with

the knowledge that the induced acts would constitute infringement. For example, STMicroelectronics provides the STMicroelectronics '504 Products that have the capability of operating in a manner that infringe one or more of the claims of the '504 patent, including at least claims 1 and 10, and STMicroelectronics further provides documentation and training materials that cause customers and end users of the STMicroelectronics '504 Products to utilize the products in a manner that directly infringe one or more claims of the '504 patent. By providing instruction and training to customers and end-users on how to use the STMicroelectronics '504 Products in a manner that directly infringes one or more claims of the '504 patent, including at least claims 1 and 10, STMicroelectronics specifically intended to induce infringement of the '504 patent. On information and belief, STMicroelectronics engaged in such inducement to promote the sales of the STMicroelectronics '504 Products, e.g., through STMicroelectronics user manuals, product support, marketing materials, and training materials to actively induce the users of the accused products to infringe the '504 patent. Accordingly, STMicroelectronics has induced and continues to induce users of the accused products to use the accused products in their ordinary and customary way to infringe the '504 patent, knowing that such use constitutes infringement of the '504 patent.

108. The '504 patent is well-known within the industry as demonstrated by the over 30 citations to the '504 patent family in issued patents and published patent applications assigned to technology companies and academic institutions (*e.g.*, Apple, Inc. and Electronics and Telecommunications Research Institute (ETRI)). Several of STMicroelectronics' competitors have paid considerable licensing fees for their use of the technology claimed by the '504 patent. In an effort to gain an advantage over STMicroelectronics' competitors by utilizing the same licensed technology without paying reasonable royalties, STMicroelectronics infringed the '504 patent in a manner best described as willful, wanton, malicious, in bad faith, deliberate, consciously wrongful, flagrant, or characteristic of a pirate.

109. To the extent applicable, the requirements of 35 U.S.C. § 287(a) have been met with respect to the '504 patent.

110. As a result of STMicroelectronics' infringement of the '504 patent, MOV Intelligence has suffered monetary damages, and seeks recovery in an amount adequate to compensate for STMicroelectronics' infringement, but in no event less than a reasonable royalty for the use made of the invention by STMicroelectronics together with interest and costs as fixed by the Court.

COUNT IV
INFRINGEMENT OF U.S. PATENT NO. 6,931,536

111. MOV Intelligence references and incorporates by reference the preceding paragraphs of this Complaint as if fully set forth herein.

112. STMicroelectronics designs, makes, uses, sells, and/or offers for sale in the United States products and/or services for enhanced copy protection using multiple watermarks embedded in digital content.

113. STMicroelectronics designs, makes, sells, offers to sell, imports, and/or uses system-on-chip ("SoC") products that provide solutions for premium, high-quality, UHD client and server set-top boxes. The infringing SoC products include: STiH314, STiH318, STiH412, STiH414, and STiH418 (the "STMicroelectronics '536 Product(s)").

114. On information and belief, one or more STMicroelectronics subsidiaries and/or affiliates use the STMicroelectronics '536 Products in regular business operations.

115. On information and belief, one or more of the STMicroelectronics '536 Products include watermarking technology.

116. On information and belief, one or more of the STMicroelectronics '536 Products contains functionality using two or more watermarks embedded in digital content for enhanced copy protection.

117. On information and belief, one or more of the STMicroelectronics '536 Products enable detecting a watermark embedded in selected blocks of a watermarked data stream having a plurality of data elements.

118. On information and belief, the STMicroelectronics '536 Products are available to businesses and individuals throughout the United States.

119. On information and belief, the STMicroelectronics '536 Products are provided to businesses and individuals located in the Eastern District of Texas.

120. On information and belief, the STMicroelectronics '536 Products enable the detection or placement of a watermark in data.

121. On information and belief, the STMicroelectronics '536 Products comprise a system wherein a first watermark is to be processed by programmable and non-programmable devices configured to process the first watermark for copy protection of the proprietary material.

122. On information and belief, the STMicroelectronics '536 Products enable looking for and processing the second watermark for copy protection of the proprietary material upon failing to detect the first watermark.

123. On information and belief, the STMicroelectronics '536 Products enable searching for a first watermark embedded in digital content.

124. On information and belief, the STMicroelectronics '536 Products contain functionality wherein if the first watermark is detected, the '536 Products process the first watermark for copy protection of the digital content. The '536 Products also contain functionality wherein if the first watermark is not detected, the STMicroelectronics '536 Products will search for a second watermark in the digital content.

125. On information and belief, the STMicroelectronics '536 Products enable the processing of a second watermark for copy protection of the digital content if a second watermark is detected.

126. On information and belief, the STMicroelectronics '536 Products enable the detection of a watermark.

127. On information and belief, STMicroelectronics has directly infringed and continues to directly infringe the '536 patent by, among other things, making, using, offering for sale, and/or selling digital content protection technology, including but not limited to the

STMicroelectronics '536 Products, which include infringing watermarking technologies. Such products and/or services include, by way of example and without limitation, the STiH314, STiH318, STiH412, STiH414, and STiH418 SoC products.

128. By making, using, testing, offering for sale, and/or selling watermarking products and services, including but not limited to the STMicroelectronics '536 Products, STMicroelectronics has injured MOV Intelligence and is liable to MOV Intelligence for directly infringing one or more claims of the '536 patent, including at least claims 25 and 35, pursuant to 35 U.S.C. § 271(a).

129. On information and belief, STMicroelectronics also indirectly infringes the '536 patent by actively inducing infringement under 35 USC § 271(b).

130. On information and belief, STMicroelectronics had knowledge of the '536 patent since at least service of this Complaint or shortly thereafter, and on information and belief, STMicroelectronics knew of the '536 patent and knew of its infringement, including by way of this lawsuit.

131. On information and belief, STMicroelectronics intended to induce patent infringement by third-party customers and users of the STMicroelectronics '536 Products and had knowledge that the inducing acts would cause infringement or was willfully blind to the possibility that its inducing acts would cause infringement. STMicroelectronics specifically intended and was aware that the normal and customary use of the accused products would infringe the '536 patent. STMicroelectronics performed the acts that constitute induced infringement, and would induce actual infringement, with knowledge of the '536 patent and with the knowledge that the induced acts would constitute infringement. For example, STMicroelectronics provides the STMicroelectronics '536 Products that have the capability of operating in a manner that infringe one or more of the claims of the '536 patent, including at least claims 25 and 35, and STMicroelectronics further provides documentation and training materials that cause customers and end users of the STMicroelectronics '536 Products to utilize the products in a manner that directly infringe one or more claims of the '536 patent. By

providing instruction and training to customers and end-users on how to use the STMicroelectronics '536 Products in a manner that directly infringes one or more claims of the '536 patent, including at least claims 25 and 35, STMicroelectronics specifically intended to induce infringement of the '536 patent. On information and belief, STMicroelectronics engaged in such inducement to promote the sales of the STMicroelectronics '536 Products, e.g., through STMicroelectronics user manuals, product support, marketing materials, and training materials to actively induce the users of the accused products to infringe the '536 patent. Accordingly, STMicroelectronics has induced and continues to induce users of the accused products to use the accused products in their ordinary and customary way to infringe the '536 patent, knowing that such use constitutes infringement of the '536 patent.

132. The '536 patent is well-known within the industry as demonstrated by the over 120 citations to the '536 patent in issued patents and published patent applications assigned to technology companies and academic institutions (*e.g.*, Sony Corporation and Sanyo Electric Co. Ltd.). Several of STMicroelectronics' competitors have paid considerable licensing fees for their use of the technology claimed by the '536 patent. In an effort to gain an advantage over STMicroelectronics' competitors by utilizing the same licensed technology without paying reasonable royalties, STMicroelectronics infringed the '536 patent in a manner best described as willful, wanton, malicious, in bad faith, deliberate, consciously wrongful, flagrant, or characteristic of a pirate.

133. To the extent applicable, the requirements of 35 U.S.C. § 287(a) have been met with respect to the '536 patent.

134. As a result of STMicroelectronics' infringement of the '536 patent, MOV Intelligence has suffered monetary damages, and seeks recovery in an amount adequate to compensate for STMicroelectronics' infringement, but in no event less than a reasonable royalty for the use made of the invention by STMicroelectronics together with interest and costs as fixed by the Court.

PRAYER FOR RELIEF

WHEREFORE, Plaintiff MOV Intelligence respectfully requests that this Court enter:

- A. A judgment in favor of Plaintiff MOV Intelligence that STMicroelectronics has infringed, either literally and/or under the doctrine of equivalents, the '127 patent, the '006 patent, the '504 patent, and the '536 patent;
- B. An award of damages resulting from STMicroelectronics' acts of infringement in accordance with 35 U.S.C. § 284;
- C. A judgment and order finding that Defendant's infringement was willful, wanton, malicious, bad-faith, deliberate, consciously wrongful, flagrant, or characteristic of a pirate within the meaning of 35 U.S.C. § 284 and awarding to Plaintiff enhanced damages.
- D. A judgment and order finding that this is an exceptional case within the meaning of 35 U.S.C. § 285 and awarding to Plaintiff its reasonable attorneys' fees against Defendant.
- E. Any and all other relief to which MOV Intelligence may show itself to be entitled.

JURY TRIAL DEMANDED

Pursuant to Rule 38 of the Federal Rules of Civil Procedure, MOV Intelligence requests a trial by jury of any issues so triable by right.

Dated: October 7, 2016

Respectfully submitted,

/s/ Dorian S. Berger
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