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UNITED STATES DISTRICT COURT

NORTHERN DISTRICT OF CALIFORNIA, OAKLAND DIVISION

IN RE FLASH MEMORY ANTITRUST LITIGATION	Case No. C07-0086 SBA
This Document Relates to: ALL DIRECT PURCHASER ACTIONS	**CONSOLIDATED DIRECT PURCHASER CLASS ACTION COMPLAINT** **JURY TRIAL DEMANDED**

Plaintiff, by and through his attorneys, brings this civil action against the Defendants named herein for treble damages and injunctive relief under the Sherman Act. Plaintiff alleges, upon information and belief, except as to those paragraphs applicable to him, which are based on personal knowledge, as follows:

I. NATURE OF THE ACTION

1. Defendants herein are the leading makers of flash memory, a form of electronic memory that is used in devices such as memory cards, USB flash drives, personal computers, digital audio players, digital cameras, and mobile phones. Flash memory is less expensive than competing forms of memory, and it has become the

dominant technology for use in devices requiring a significant amount of storage. There are two main types of flash memory – NOR flash memory and NAND flash memory. Plaintiff brings this action on behalf of all persons and entities who purchased NAND flash memory in the United States directly from a Defendant, or a subsidiary of a Defendant, between January 1, 1999 and the present ("Class Period"). As alleged in more detail below, Defendants and their co-conspirators conspired to fix, raise, maintain and stabilize the price of NAND flash memory sold in the United States, in violation of federal antitrust laws including the Sherman Act (15 U.S.C. § 1). As a result of Defendants' unlawful conduct, Plaintiff and other purchasers of NAND flash memory paid artificially inflated prices during the Class Period. Such prices exceeded the amount they would have paid if the price for NAND flash memory had been determined by a competitive market.

II. PARTIES

A. Plaintiff

2. Plaintiff Timothy Chanda is a Florida resident who operates a computer consulting business. During the Class Period, Plaintiff directly purchased NAND flash memory from one or more Defendants herein, and was injured as a result of Defendants' illegal conduct.

B. Defendants

3. Defendant Samsung Electronics Company Ltd. is a Korean corporation with its executive offices at Samsung Main Building, 250-2 ga, Taepyung-ro Chung-gu, Seoul, Korea. During the Class Period, Samsung Electronics Company Ltd. manufactured, sold, and distributed NAND flash memory to customers throughout the United States.

4. Defendant Samsung Semiconductor, Inc. is a California corporation located at 3655 North First Street, San Jose, California 95134. It is a wholly owned and controlled subsidiary of Defendant Samsung Electronics Company Ltd. During the Class Period, Samsung Semiconductor, Inc. sold and distributed NAND flash memory to customers throughout the United States.

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5. Defendants Samsung Electronics Company Ltd. and Samsung Semiconductor, Inc. are collectively referred to herein as "Samsung."

6. Defendant Hitachi, Ltd. ("Hitachi") is a business entity organized under the laws of Japan, with its principal place of business at 6-1 Marunouchi Center Building 13F Chiyoda-ku, Tokyo, 100-8220, Japan. During the Class Period, Hitachi Ltd. manufactured, sold, and distributed NAND flash memory to customers throughout the United States.

7. Defendant Renesas Technology Corporation is a business entity organized under the laws of Japan with its principal place of business at Marunouchi Building, 4-1, Marunouchi 2-chome, Chiyoda-ku Tokyo 100-6334, Japan. During the Class Period, Renesas Technology Corporation sold and distributed NAND flash memory to customers throughout the United States.

8. Defendant Renesas Technology America, Inc., f/k/a Hitachi Semiconductor (America) Inc., is a Delaware corporation with its principal place of business at 450 Holger Way, San Jose, California 95134. Renesas Technology America, Inc. is a wholly owned and controlled subsidiary of Defendant Renesas Technology Corporation. During the Class Period, Renesas Technology Corporation America, Inc. sold and distributed NAND flash memory to customers throughout the United States.

9. Defendants Renesas Technology Corporation and Renesas Technology America, Inc. are referred to collectively herein as "Renesas."

10. Defendant Hynix Semiconductor, Inc. is a Korean corporation with its principal place of business at SAN 136-1, Ami-Ri Bubal-eub, Ichon-si, Kyongki-do, Korea. During the Class Period, Hynix Semiconductor Inc. manufactured, sold, and distributed NAND flash memory to customers throughout the United States.

11. Defendant Hynix Semiconductor America, Inc. is a California corporation with its principal place of business at 3101 North First Street, San Jose, California 95134. It is a wholly owned and controlled subsidiary of Defendant Hynix Semiconductor, Inc. During the Class Period, Hynix Semiconductor America, Inc. sold and distributed NAND

flash memory to customers throughout the United States.

12. Defendants Hynix Semiconductor, Inc. and Hynix Semiconductor America, Inc. are referred to collectively herein as "Hynix."

13. Defendant Mitsubishi Electric Corp. is a business entity organized under the laws of Japan, with its principal place of business at Tokyo Building 2-7-3, Marunouchi, Chiyoda-ku, Tokyo 100-8310, Japan. During the Class Period, Mitsubishi Electric Corp. manufactured, sold, and distributed NAND flash memory to customers throughout the United States.

14. Defendant Mitsubishi Electric and Electronics USA, Inc. is a Delaware corporation with its principal place of business at 500 Corporate Woods Parkway, Vernon Hills, Illinois 60061. It is a wholly owned and controlled subsidiary of Defendant Mitsubishi Electric Corp. During the Class Period, Mitsubishi Electric and Electronics USA, Inc. manufactured, sold, and distributed NAND flash memory to customers throughout the United States.

15. Defendants Mitsubishi Electric Corp. and Mitsubishi Electric and Electronics U.S.A., Inc. are referred to collectively herein as "Mitsubishi."

16. Defendant SanDisk Corporation ("SanDisk") is a Delaware corporation with its principal place of business at 601 McCarthy Boulevard, Milpitas, California 95035. During the Class Period, SanDisk manufactured, sold, and distributed NAND flash memory to customers throughout the United States.

17. Defendant Toshiba Corporation is a business entity organized under the laws of Japan, with its principal place of business at 1-1, Shibaura I-chome, Minato-ku, Tokyo 105-9001, Japan. During the Class Period, Toshiba Corporation manufactured, sold, and distributed NAND flash memory to customers throughout the United States.

18. Defendant Toshiba America, Inc. is a Delaware corporation with its principal place of business at 1251 Avenue of the Americas, Suite 4110, New York, New York 10020. It is a wholly owned and controlled subsidiary of Defendant Toshiba Corporation. During the Class Period, Toshiba America, Inc. sold and distributed NAND flash memory

to customers throughout the United States.

19. Defendant Toshiba America Electronic Components, Inc. is a California corporation with its principal place of business at 19900 MacArthur Boulevard, Suite 400, Irvine, California 92612. It is a wholly owned and controlled subsidiary of Toshiba Corporation. During the Class Period, Toshiba America Electronic Components, Inc. sold and distributed NAND flash memory to customers throughout the United States.

20. Defendants Toshiba Corporation, Toshiba America, Inc., and Toshiba America Electronic Components, Inc. are referred to collectively herein as "Toshiba."

III. CO-CONSPIRATORS

21. Various others, presently unknown to Plaintiff, participated as co-conspirators with the Defendants in the violations of law alleged in this Complaint and have engaged in conduct and made statements in furtherance thereof.

22. All joint ventures created by the Defendants as described herein were controlled and operated by the joint venturers and to the extent such ventures committed acts in furtherance of the conspiracy, they are liable as co-conspirators.

23. The acts charged in this Complaint have been done, within this district and worldwide, by Defendants and their co-conspirators, or were authorized, ordered, or done by their respective officers, agents, employees, or representatives while actively engaged in the management of each Defendant's business or affairs.

IV. JURISDICTION AND VENUE

24. This Complaint is brought under Sections 4 and 16 of the Clayton Act (15 U.S.C. §§ 15 and 26) to obtain relief and recover treble damages and the costs of this suit, including reasonable attorneys' fees, against Defendants for the injuries sustained by Plaintiff and the members of this Class by reason of Defendants' violations of Section 1 of the Sherman Act (15 U.S.C. § 1).

25. This Court has jurisdiction over this action pursuant to 28 U.S.C. Sections 1331 and 1337 and Sections 4 and 16 of the Clayton Act (15 U.S.C. §§ 15 and 26).

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26. Venue is proper in this judicial district pursuant to 15 U.S.C. Section 22 and 28 U.S.C. Section 1391 because one or more Defendants reside, transact business, or are found within this District, and a substantial part of the events giving rise to the claims arose in this District.

V. CLASS ACTION ALLEGATIONS

27. Plaintiff brings this suit as a class action pursuant to the Federal Rules of Civil Procedure, Rule 23(a) and (b)(3), on behalf of himself and a class defined as follows:

> All persons and entities who, during the period from January 1, 1999 to the present, purchased NAND flash memory in the United States directly from one or more Defendants or their subsidiaries. Excluded from the class are: Defendants and their parents, subsidiaries, and affiliates; all governmental entities; and co-conspirators.

28. As used herein, the term "NAND flash memory" refers not only to NAND flash memory chips, but also to such chips incorporated in units that allow them to interact with other electronic products. Examples of the latter include flash memory cards and USB thumb drives.

29. Plaintiff does not know the exact number of Class members because such information is in the exclusive control of Defendants. Due to the nature of the trade and commerce involved, however, Plaintiff believes that Class members are sufficiently numerous and geographically dispersed throughout the United States such that joinder of all Class members is impracticable.

30. The Class is ascertainable, and there is a well-defined community of interest among the Class members.

31. Plaintiff's claims are typical of the claims of the members of the Class in that Plaintiff purchased NAND flash memory from one or more of the Defendants and their co-conspirators, and therefore, Plaintiff's claims arise from the same common course of conduct giving rise to the claims of the Class members and the relief sought is common to the Class.

32. Numerous questions of law and fact arising from Defendants' anticompetitive conduct are common to the Class, including:

a. whether Defendants engaged in a contract, combination, or conspiracy to fix, maintain, or stabilize the prices of, or allocate the market for, NAND flash memory sold in the United States;

b. the duration of the conspiracy alleged in the Complaint and the nature and character of the acts performed by Defendants in furtherance of the conspiracy;

c. whether the alleged conspiracy violated Section 1 of the Sherman Act;

d. whether Defendants' conduct caused prices of NAND flash memory to be artificially inflated to non-competitive levels; and

e. whether Plaintiff and other members of the Class were injured by Defendants' conduct, and if so, the appropriate measure of damages and appropriate injunctive relief.

33. These and other questions of law or fact are common to the Class and predominate over any questions affecting only individual Class members.

34. Plaintiff will fairly and adequately represent the interests of the Class in that Plaintiff has no interests that are antagonistic to other members of the Class and has retained counsel competent and experienced in the prosecution of class actions and antitrust litigation.

35. A class action is superior to the alternatives, if any, for the fair and efficient adjudication of this controversy because individual joinder of all damaged Class members is impractical. The damages suffered by many individual Class members are relatively small, given the expense and burden of individual prosecution of the claims asserted in this litigation. Thus, absent the availability of class action procedures, it would not be feasible for many Class members to redress the wrongs done to them. Even if Class members could afford individual litigation, the court system could not. Furthermore, prosecution of separate actions by individual Class members would create the risk of inconsistent or contradictory judgments and would greatly magnify the delay and expense to all parties and the court system. Therefore, the class action device presents far fewer case

management difficulties and will provide the benefits of unitary adjudication, economies of scale, and comprehensive supervision by a single court.

36. Injunctive relief is appropriate as to the Class as a whole because Defendants have acted, and refused to act, on grounds generally applicable to the Class.

37. In the absence of a class action, Defendants would be unjustly enriched because they would be able to retain the benefits and fruits of their wrongful conduct.

VI. INTERSTATE TRADE AND COMMERCE

38. During the Class Period, Defendants and their co-conspirators manufactured, sold, and distributed NAND flash memory in a continuous and uninterrupted flow of interstate and international commerce, including to and throughout the United States. During each year of the Class Period, total sales of NAND flash memory were in the billions of dollars.

VII. FACTUAL ALLEGATIONS

A. Flash Memory Technology

39. Flash memory is a form of electronic memory that can be erased and reprogrammed many times. Flash memory is "non-volatile," meaning that it does not lose stored data when the power is turned off. This characteristic distinguishes flash memory from "volatile" memory storage devices such as random access memory ("RAM"), which requires power to maintain stored information.

40. Defendant Toshiba developed flash memory in two generations during the 1980s. The first generation of flash memory was NOR flash memory. In NOR flash memory, individual memory cells are connected in parallel. NOR flash memory is reliable and offers fast read operations. However, NOR flash memory has slow erase and write times. Thus, it is better suited for storing codes and other information that is not frequently changed.

41. Toshiba developed a second type of flash memory – NAND flash memory – in 1987. NAND flash memory was developed for high density data storage, trading off random access capability to achieve a smaller cell size. This was done by creating an array

of memory transistors connected in a series. NAND flash memory has faster erase and write times, and it requires a smaller chip area per cell, thus allowing more storage for less cost than NOR flash memory. NAND flash memory is ideal for low-cost and high density data-storage applications.

42. As a result of its advantages in terms of cost, file storage, memory capacity, and write speed, NAND flash memory has become the preferred format for consumer media applications. Samsung has said that NAND flash memory is the fastest-growing product segment in the global semiconductor market. It is used primarily in: (a) flash memory cards that are incorporated in products such as cameras, handsets, and camcorders; (b) flash drives utilizing the universal serial bus ("USB") interface; and (c) embedded flash memory for consumer and handset applications, such as Apple iPod digital music players.

43. NAND flash memory is now produced in single level cell ("SLC") and multi-level cell ("MLC") variants. MLC NAND flash memory allows each memory cell to store two bits of information, compared to the one bit power cell that SLC NAND flash memory allows. As a result, MLC NAND flash memory offers a larger capacity at a price point appropriate for consumer products. On the other hand, SLC NAND flash memory, while offering a lower density, provides faster write speeds and has a lower likelihood of error. MLC NAND flash memory typically has a lower lifecycle expectancy than SLC NAND flash memory. Despite these minor differences, NAND flash memory is a homogenous commodity product.

B. Characteristics of the NAND Flash Memory Market

44. The NAND flash memory industry has several characteristics that have facilitated the conspiracy alleged herein. These features include high market concentration, substantial barriers to entry, numerous business interrelationships, and the presence of trade associations established for the purpose of fostering cooperation.

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1. High Market Concentration

45. The NAND flash memory market is highly concentrated. Throughout the Class Period, it has been dominated by less than a handful of suppliers. According to Samsung, the major flash memory suppliers in 2004 and 2005 were as follows (dollar figures are in millions):

Supplier	Revenues in 2004	Revenues in 2005	Market Share in 2005	Growth in 2005
Samsung	$3,901	$5,742	52.8%	28.8%
Toshiba	$1,850	$2,382	21.9%	28.8%
Renesas	$600	$735	6.8%	22.5%
Hynix	$221	$1,382	12.7%	525%
Micron[1]	$8	$238	2.2%	2,875%

46. Based on data reported by industry analyst iSuppli Corporation ("iSuppli"), three suppliers – Samsung, Toshiba, and Hynix – controlled nearly 90 percent of the worlwide sales of NAND flash memory by the end of 2006. iSuppli reported the following market shares for 2006 and 2007:

Supplier	Market Share in 2006	Market Share in 2007
Samsung	45.4%	46%
Toshiba	26.1%	28%
Hynix	17.7%	14.6%
Renesas	4.8%	2%
Micron	2.9%	5.4%
Other	3.1%	3.1%

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[1] "Micron" refers to Micron Technology, Inc., a maker of various memory products.

47. Between 2004 and 2007, the NAND flash memory industry scored more than 3,000 on the Herfindahl-Hirschman Index, which measures market concentration on a scale of 0 to 10,000. The United States Department of Justice ("DOJ") considers markets that score 1,800 or more on this index as being highly concentrated. Markets with high concentration are conducive to price-fixing and other collusive activity.

2. Barriers to Entry

48. There are substantial barriers to entry into the flash memory industry. A modern, state-of-the-art fabrication facility ("fab") that can process flash memory down to a size of 40 nanometers ("nm") can cost $4 to $5 billion. This fact is conducive to the conspiracy alleged herein because it protects existing suppliers from new competition and perpetuates the high market concentration. Defendants are well aware that few companies have the means to effectively enter the rapidly evolving semiconductor industry.

3. Business Interrelationships

49. The flash memory industry is marked by a web of cross-licensing and joint venture agreements among Defendants that facilitate collusive behavior. These include the following:

a. In April of 1995, Toshiba announced that it had reached an agreement with Samsung to jointly develop certain NAND technologies. The agreement complemented a 1992 agreement concerning the joint development of certain early generation NAND-type technologies.

b. In July of 1997, SanDisk and Hitachi cross-licensed a broad range of flash technologies to each other. In October of 2000, these companies renewed their earlier agreement and expanded it to include cross-license agreements for additional NAND flash technologies, including the joint use of the companies' advanced multilevel cell patent portfolios. These agreements continue between SanDisk and Hitachi's successor in the NAND flash memory business, Defendant Renesas.

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c. In 2000, SanDisk and Toshiba jointly formed FlashVision, Ltd. ("FlashVision"), which operated a flash memory fabrication facility in Manassas, Virginia. In May of 2002, FlashVision decided to consolidate 200mm NAND wafer production in Fabs 1 and 2 of Toshiba's facilities in Yokkaichi, Japan.

d. On March 18, 2002, Defendants Hitachi and Mitsubishi publicly announced that they were going to consider merging their memory businesses, including their NAND flash operations. On April 3, 2003, these former competitors spun-off their NAND flash operations into Defendant Renesas. The licensing agreements between SanDisk and Hitachi were assumed by Renesas during this merger.

e. On August 20, 2002, Samsung and SanDisk announced that they had reached an agreement to cross-license NAND flash multilevel cell technology. Samsung reportedly agreed to supply SanDisk with NAND flash memory until at least 2009. This agreement replaced a prior agreement that had recently expired.

f. In September of 2004, Toshiba and SanDisk formed a second joint venture called Flash Partners, Ltd. that constructed a Fab 3 at Yokkaichi to manufacture 300mm NAND wafers.

g. In July of 2006, Toshiba and SanDisk created Flash Alliance, Ltd., their third joint venture, which built Fab 4, another 300mm wafer facility at Yokkaichi.

h. On September 15, 2006, Toshiba announced that it had agreed to purchase the rights to certain NAND-related patents from Micron's subsidiary, Lexar Media, Inc. ("Lexar").

i. On March 20, 2007, it was announced that Hynix and Toshiba entered into an agreement to share licenses to use one another's semiconductor patents, including those covering NAND flash memory technology.

O.C. Kwon, Senior Vice-President for Hynix, called the agreement "a good foundation for our two companies to build a mutually beneficial business relationship in the future." Hynix also reportedly has an agreement to supply 10 to 12 percent of its flash memory output to Toshiba.

j. On March 21, 2007, Hynix and SanDisk announced that they had reached: (1) an agreement for a patent cross-license covering the flash memory components of both companies and (2) an agreement for product supply. Concurrently, the companies signed a memorandum of understanding that outlined a joint venture contemplated between the two companies that will manufacture memory components and sell NAND flash memory system solutions.

k. On December 3, 2007, Samsung and Toshiba announced that they had licensed to one another the rights to produce, market and sell memory with the specifications and trademarks of Samsung's OneNAND™ and Toshiba's LBA-NAND™ memory chips.

4. Trade Association Activities

50. The Defendants belong to a web of different trade associations and participate in various industry trade shows, all of which provide forums at which they can collude to fix prices and limit capacity for NAND flash memory.

51. One such association is the Compact Flash Association ("CFA"), founded in October of 1995. Samsung, Toshiba, Hitachi, Mitsubishi, and SanDisk are all members of the organization.

52. CFA members hold regular meetings to discuss association business. They also participate in various trade shows attended by other members. History has shown that association meetings and trade shows provide an excellent incubator for the development of antitrust conspiracies. These trade shows included the following:

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Date	Event	Participating Defendants
January 6-9, 2001	2001 Consumer Electronics Show ("CES") in Las Vegas, Nevada	Samsung, Hitachi, SanDisk
February 11-14, 2001	Photo Marketing Association ("PMA") 2001 in Orange County, California	Samsung, Hitachi, SanDisk
January 8-11, 2002	2002 CES in Las Vegas, Nevada	Samsung, Toshiba, SanDisk
September 25-30, 2002	Photokina 2002 in Koln, Germany	Samsung, Toshiba, Hitachi, Mitsubishi, SanDisk
October 16, 2002	World PC ("WPC") Expo in Tokyo, Japan	Samsung, Hitachi, Toshiba, SanDisk
September 17-20, 2003	WPC Expo in Tokyo, Japan	Samsung, Hitachi, Toshiba, SanDisk
January 5-8, 2006	2006 CES in Las Vegas, Nevada	Samsung, Hitachi, Toshiba, SanDisk

53. Hynix and Hitachi are also members of the Open NAND Flash Interface Group ("ONFI"), an organization formed in May of 2006 to promote the integration of NAND flash memory in consumer electronic devices.

54. In addition, Samsung, Toshiba, Hitachi, and SanDisk are members of the MultiMedia Card Association ("MMCA"), an organization founded in 1998 that bills itself as a "global forum for memory card and semiconductor component suppliers."

55. Samsung, Hynix, Toshiba, Hitachi, Mitsubishi, Renesas, and SanDisk are also members of the JEDEC Solid State Technology Association ("JEDEC"), an organization initially created in 1960, which is the semiconductor engineering standardization body of the Electronic Industries Alliance. JEDEC touts as one of the advantages of membership "tak[ing] advantage of NETWORKING opportunities" by "mak[ing] valuable contacts throughout the industry…."

56. Defendants are also members of one or more other trade associations that provides opportunities to conspire on the pricing and supply of NAND flash memory. These include: (a) the 1394 Trade Association, in which Samsung, Toshiba, Hitachi,

Renesas, and Mitsubishi are members; (b) the Semiconductor Equipment Association of Japan ("SEAJ"), in which Toshiba, Hitachi, Mitsubishi, and Samsung's Japanese subsidiary are members; and (c) the Korea Semiconductor Industry Association ("KSIA"), in which Samsung and Hynix are members.

57. In addition, Hynix and Samsung participate in iSEDEX, the International Semiconductor and Display Exhibition that is held annually in Seoul, Korea. The 2006 iSEDEX conference was held there on October 11-13, 2006. The 2007 conference was held there in August 2007.

58. Another forum that provides opportunities to collude is the annual "Flash Memory Summit" held in Santa Clara, California since 2006. Defendants named here have sent representatives to sessions of the summit.

59. Although these in-person meetings certainly facilitate the development of a conspiracy, once underway, the relationships between the cartel's members have been, and are easily, maintained. As one of the defendants in the criminal prosecution involving dynamic random access memory ("DRAM") phrased it: "[y]ou don't need to have a meeting ... You just need to have a phone call. Everybody knows each other. We just said 'try not to sell below US$3.'" Mike Peterson, an Account Manager for Hynix's U.S. subsidiary, has said that he understood the Koreans routinely talked to each other and had seen e-mails from C.K. Chung, Hynix's Director of Global Accounts, that confirmed this.

C. Defendants' History of Collusive Conduct in the Memory Industry

60. Two of the Defendants named here – Hynix and Samsung – have already pled guilty to price-fixing in the related industry for DRAM and have paid substantial fines to the DOJ for those unlawful activities ($300 million for Samsung and $185 million for Hynix). Micron Technology, Inc., another memory manufacturer, was the amnesty applicant in the DRAM price-fixing investigation. Major direct purchasers of DRAM – Honeywell International, Inc, Unisys Corp., and Sun Microsystems, Inc. – have filed civil antitrust actions involving DRAM against Defendants Mitsubishi, Hitachi, and/or Renesas.

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61. The DRAM conspiracy was effectuated and monitored by the participants through frequent exchanges of price and supply information as described in greater detail below. These information exchanges were not limited solely to DRAM, but included exchanges of information about flash memory as well.

62. Defendants Hitachi, Hynix, Mitsubishi, Renesas, Samsung, and Toshiba are also under investigation by the DOJ and/or civil plaintiffs with respect to collusive pricing activities in the market for static random access memory ("SRAM").

63. One commentator has noted the pervasiveness of cartel activity among Defendants and others in the semiconductor industry: "'[i]f the DOJ wanted to, it could just go down every line in the semiconductor industry and find the same issue,' said Gartner Inc. analyst Richard Gordon. That's because there are a relatively few number of suppliers in the chip industry and an open flow of communication between competitors and customers, who may not define price fixing the same way the DOJ does, he said."

64. Indeed, in many instances, the Defendants are competitors, partners, and customers all at the same time. For example, SanDisk and Toshiba have a long-standing joint venture agreement concerning the manufacture of NAND flash memory. Toshiba reportedly has the right to acquire 10 to 12 percent of Hynix's NAND flash memory output. Hitachi and Mitsubishi created Renesas to take over their NAND flash memory operations. Moreover, as described more fully above, all of the Defendants, in one form or another have agreed to share NAND flash technologies with each other.

65. The admitted illegal conduct in the DRAM criminal case, as well as the alleged illegal conduct in the SRAM criminal case, demonstrate that Defendants' respective corporate cultures encouraged the type of conduct alleged herein. In November of 2007, Yong-Chul Kim, the former chief lawyer for Samsung, admitted that the company "instructed me to commit crimes." Kim continued, "[a] basic responsibility for all Samsung executives is to do illegal lobbying, buying people with money." Kim also acknowledged that he fabricated court evidence on behalf of the company and its executives, and several Samsung executives have recently been convicted of bribery and

other white collar crimes.

D. Defendants' Collusive Conduct in the Flash Memory Industry

66. The Defendants herein had contacts with each other in multiple related markets (*e.g.*, the DRAM, SRAM, and flash memory markets). These multi-market contacts allowed Defendants to transfer learning from one market to another and also enhanced Defendants' ability to monitor, enforce, and sustain the NAND flash memory conspiracy.

67. The same employees of the Defendant companies were responsible for pricing of DRAM, SRAM, and flash memory sold in the United States. For example, many of the individuals employed by Defendants who pled guilty to criminal felonies in the DOJ's DRAM investigation also had pricing responsibility for NAND flash memory.

68. The Samsung employees who pled guilty to felony violations in connection with DRAM who also had responsibility of NAND flash memory pricing are: (a) Y.H. Park, Samsung Electronics Company Ltd.'s Vice-President of Sales; (b) I.U. Kim, Samsung Electronics Company Ltd.'s Vice-President of Marketing; and (c) Tom Quinn, Vice-President of Marketing for Memory Products at Samsung Semiconductor, Inc. Despite these guilty pleas, Samsung has continued to use the services of some of these employees. For example, two months after entering a guilty plea, Quinn was seen representing Samsung at a conference it sponsored in San Jose, California.

69. The Hynix employees who pled guilty to felony violations in connection with DRAM and who also had responsibility for NAND flash memory pricing are: (a) D.S. Kim, Senior Vice-President and General Manager of Worldwide Sales and Marketing; (b) C.K. Chung, Director of Global Strategic Accounts; (c) C.Y. Choi, Senior Manager and Vice-President for Product Marketing and Vice-President for Operations; and (d) K.C. Suh, Hynix's Senior Manager for Memory Product Marketing.

70. Additionally, in the civil DRAM litigation, many employees of DRAM manufacturer Mosel Vitelic Inc. ("Mosel") invoked their Fifth Amendment privilege against self-incrimination and refused to answer deposition questions about whether they

had discussed pricing with competitors.

71. Plaintiff believes that the conspiracy with respect to NAND flash memory was conducted, in part, in a manner similar to the DRAM conspiracy reflected in various informations filed by the DOJ against companies and individuals in that case and in various witness statements placed on the public record in *United States v. Gary Swanson*, Case No. 3:06-cr-00692 PJH (N.D. Cal.) ("*Swanson*"), an ongoing criminal trial against one of Hynix's executives.

72. As in the DRAM case, the NAND flash memory conspiracy had among its goals: (a) coordination of pricing among competitors to ensure that no market supplier was so out of line that it would lose market share by being too high or "leave money on the table" by being too low; (b) stabilization of prices in order to prevent them from falling too low in downward markets; and (c) raising prices when opportunities arose. To accomplish these goals in an upward market, when supplies were tight or demand was strong, Defendants talked and agreed on when and by how much the price should go up, sometimes discussing specific prices negotiated with customers. In declining markets, where there was oversupply or demand was low, Defendants discussed ways to stabilize prices to prevent them from falling lower and agreed to maintain certain floor prices. In flat markets, Defendants discussed the need to keep prices stable and agreed to maintain prices in the face of customer pressure to reduce prices.

73. As in the DRAM case, the primary mode of communication for the NAND flash memory conspiracy was through one-on-one telephone calls designed to ensure that the conspiracy was kept secret. The number of telephone calls varied among the conspirators, based on their positions and their involvement in the conspiracy. Some lower level sales managers had numerous telephone calls with their counterparts employed by other Defendants. High level executives had fewer direct contacts with their competitors, but instead directed subordinates to handle the bulk of such communications. At times, however, some of the higher level executives had direct meetings or conversations with their counterparts in which they acknowledged or endorsed what their subordinates were

doing or actually reached agreements with their co-conspirators.

74. As in DRAM, in terms of day-to-day implementation of the NAND flash memory conspiracy, Defendants directed their regional or account managers to contact each other and coordinate NAND flash memory pricing. These contacts could be by telephone or by face-to-face meetings at local restaurants. Through these contacts, Defendants' sales managers exchanged future price information and entered into implicit or explicit pricing agreements.

1. The Operation of the NAND Flash Memory Conspiracy

75. In many respects, NAND flash memory is a commodity product and hence is highly price elastic. NAND technology, like other memory products such as DRAM and SRAM, are subject to very steep price declines and rapidly advancing technology. In this industry, it is normal and expected for average sales price per gigabit ("Gb") to experience double-digit quarterly declines. Notwithstanding these declines, manufacturers can generate profits by continually reducing their manufacturing costs. Moreover, what the manufacturers lose by way of profit on the sale of a given unit of memory, they make up for in the huge increases in the volume of quarter over quarter memory sales.

76. The phenomenon of rapidly decreasing average sales price per gigabit of memory manufactured is not new. It has been occurring for more than 40 years and industry experts do not see the trend diminishing in the near future. Indeed, in order to provide some perspective, Samsung's operating margins in its flash memory division were reportedly 40 percent in November of 2005.

77. The NAND flash memory market is notable for periods of time where the normal and expected rapid deterioration in average selling price per gigabit stalled, and on occasion, reversed course and actually rose. Throughout the Class Period, Defendants have enjoyed unnatural price stability. Defendants achieved this price stability by collusively agreeing to reduce or limit capacity for the purpose of stabilizing and/or increasing prices. Even in those time periods when short-term conditions of oversupply caused prices for NAND flash memory to fall, the alleged conspiracy caused those prices

to decrease at a lesser rate than would have been the case under competitive conditions.

2. Intercompetitor Contacts and Pricing During 1999-2001

78. The NAND flash memory conspiracy was intertwined, at least in its initial years to some degree, with the DRAM and SRAM conspiracies. Because the same personnel at the various memory manufacturers were exchanging pricing and other competitive information about DRAM and SRAM, it was natural that they would do so for flash memory products as well.

79. Defendants' employees had meetings with their peers at competitor companies to exchange information about the memory products they sold, including information about capacity and prices of flash memory. Defendants endorsed the sharing of competitive information so long as it was reciprocal.

80. In August of 1998, Samsung told Hynix that it would be attempting to raise memory prices "across the board in September." Samsung reportedly told Hynix that it would "coordinate with Japanese suppliers, asking them to raise, or at least not to lower from August prices."[2]

81. In September of 1998, Micron Technology, Inc.'s President and CEO Steve Appleton received from Yukio Sakamoto of Kobe Steel Ltd. a "random note of Samsung/Nikkei people information." Sakamoto reported that he "met Samsung Director and Nikkei reporter last night and today … summary of key information (both of Samsung and I well know about anti-trust law so that we never discussed that area) … Samsung will de-emphasize 64M DRAM, but will emphasize … Flash (aiming 70% market share!!)."

82. As part of its disclosures in exchange for leniency from the DOJ, Micron Technology, Inc. admitted that Tom Addie, its Regional Sales Manager for Apple Computer, had communications with John Cerrato, Samsung's Apple Account Manager,

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[2] The internal documents or employee statements cited herein come from documents or DOJ witness interviews placed in the public record in the *Swanson* case or the unsealed summary judgment record in *In re Dynamic Random Access Memory (DRAM) Antitrust Litigation*, Case No. M-02-1486 PJH (N.D. Cal.).

regarding "products their companies sold and coming market trends." Micron also acknowledged that Jon Biggs, Micron's Regional Sales Manager for Gateway Computers, had communications with Tom Quinn of Samsung including "in general terms, their employers' current pricing on various products … [and] their inventory levels on various products."

83. On September 7, 2000, Jay McBroom, Manager of Central Area Sales for Hynix's U.S. subsidiary, sent an e-mail to his colleagues in other regions saying "[l]et me know any competitive information that you garner."

84. In March of 2001, there was an information-sharing session between Hynix and Winbond Electronics Corporation, another company involved in the DRAM price-fixing investigation, concerning "Fab Status" for "Fab2 (6"0: 47K/0.6-0.35um/SRAM, Flash, Multimedia, Foundry)."

85. The information sharing among Defendants even extended to internal documents created by the Defendant companies. For example, Stefan Schauss of Winbond Electronics Corporation admitted having communications with Samsung about flash memory in which they exchanged roadmaps.

86. During 2001, NAND flash memory contract pricing, like DRAM pricing, experienced a decline. Then, in the first quarter of 2002, the sales price per gigabit of 512Mb NAND (which at the time was the dominant NAND component, accounting for more than 68 percent of NAND sales by gigabit) increased more than 20 percent. These NAND flash memory price increases coincided with price increases led by Samsung in the related DRAM market that occurred in late 2001 and were the product of collusion among Defendants.

87. On November 13, 2001, Samsung's Vice-President of Marketing sent an email to the heads of Samsung's regional memory sales groups, including the "America Memory Sales Group," instructing "the main office in its own way, as well as each branch office's person in charge in his own way, must contact his competitors' contact points and indicate that we must not retreat from the last quoted price."

88. Also in late 2001, D.S. Kim of Hynix and Y.B. Rha, then Director of Sales & Marketing for Samsung, met for breakfast at a restaurant in Korea (one of several similar meetings they had between 1999 and 2002). Kim "acknowledge[d] that they were in a common mood and would cooperate on pricing." Kim subsequently advised his subordinates of this meeting. C.K. Chung of Hynix knew of these meetings and that the two companies were "in the same boat with pricing." As Paul Palonsky of Hynix's U.S. subsidiary (and who is still employed at Hynix) characterized it, "C.K. Chung and the Koreans saw Samsung as the big brother, and they thought if Samsung were getting a certain price, Hynix should get it too." These meetings in Korea set the stage for collusion among Samsung, Hynix, and others that encompassed multiple memory products. Palonsky referred to a "pervasive thirst" for competitive pricing information within the "Hynix culture." During internal conference calls at Hynix, employees would routinely relate pricing information received by their "buddies" employed by competitors.

3. Intercompetitor Contacts and Pricing During 2002-2006

89. Defendants continued to have meetings during the 2002 to 2006 period to share competitive information about flash memory.

90. In February of 2002, Samsung's Vice-President of Global Accounts Sales and Marketing wrote, "[i]n order not to damage ourselves I think we should be closer to Micron's pricing than Hynix, and Hynix may be benefiting much more than Samsung and Micron with this strategy. I don't want to be at the top of the pack if the demand slackens in Q2. If we are in the middle, we can still convince the customer to take the volume and let them punish someone else temporarily, even if this means our market share goes up."

91. In March of 2002, sales and marketing personnel at Samsung discussed "preventing a price war for share" with their competitors. They stated, "[i]f we all set reasonable sales expectations at the Global accounts that no major supplier feels his share is being attacked, we can all enjoy reasonable pricing for reasonable volume. If we get too greedy for increased volumes over what the customer has asked us to commit, our competitors will fight back aggressively beginning with secret deals, etc. The market

shares are fairly comfortable for the major suppliers at this time so this scenario is possible."

92. On June 18, 2002, Kevin Chen of Mosel wrote in an e-mail titled "Today's Main Memory" that "Micron appears to have joined Samsung and Hynix in trying to raise the spot market pricing [on DRAM] … the increased prices are purely supplier driven and not demand driven. Obviously, if the 'big 3' can stick together, I believe the price can continue to be raised regardless of the demand situation." Chen also wrote to Ron Farrell and included a chart which shows competitor pricing by product and customer. It included pricing for "2M Flash" for customer Ultima.

93. As noted above, on August 20, 2002, SanDisk and Samsung cross-licensed certain NAND related intellectual property to each other. Y.W. Lee, Samsung's CEO, stated that "[w]ith these agreements in place, the two companies bring a stronger and more stable flash future for the end users." Consistent with this prediction, NAND flash memory prices began to rise in the beginning of 2003.

94. The average price per gigabit of NAND fluctuated during 2003, but remained relatively flat for the year. The second half of 2003, in particular, experienced rapid increases in the average sales price per gigabit of NAND. During much of 2003, there was a flash memory shortage brought about by Samsung and its rivals jointly failing to produce enough capacity to meet demand. By July of 2003, this shortage had caused NAND flash memory prices to increase over 10 percent, depending on density. The shortage and higher prices continued through November of 2003 and for the rest of the year.

95. The following graph illustrates the stability of contact prices between 2001 and 2003 for NAND flash memory in seven popular densities:

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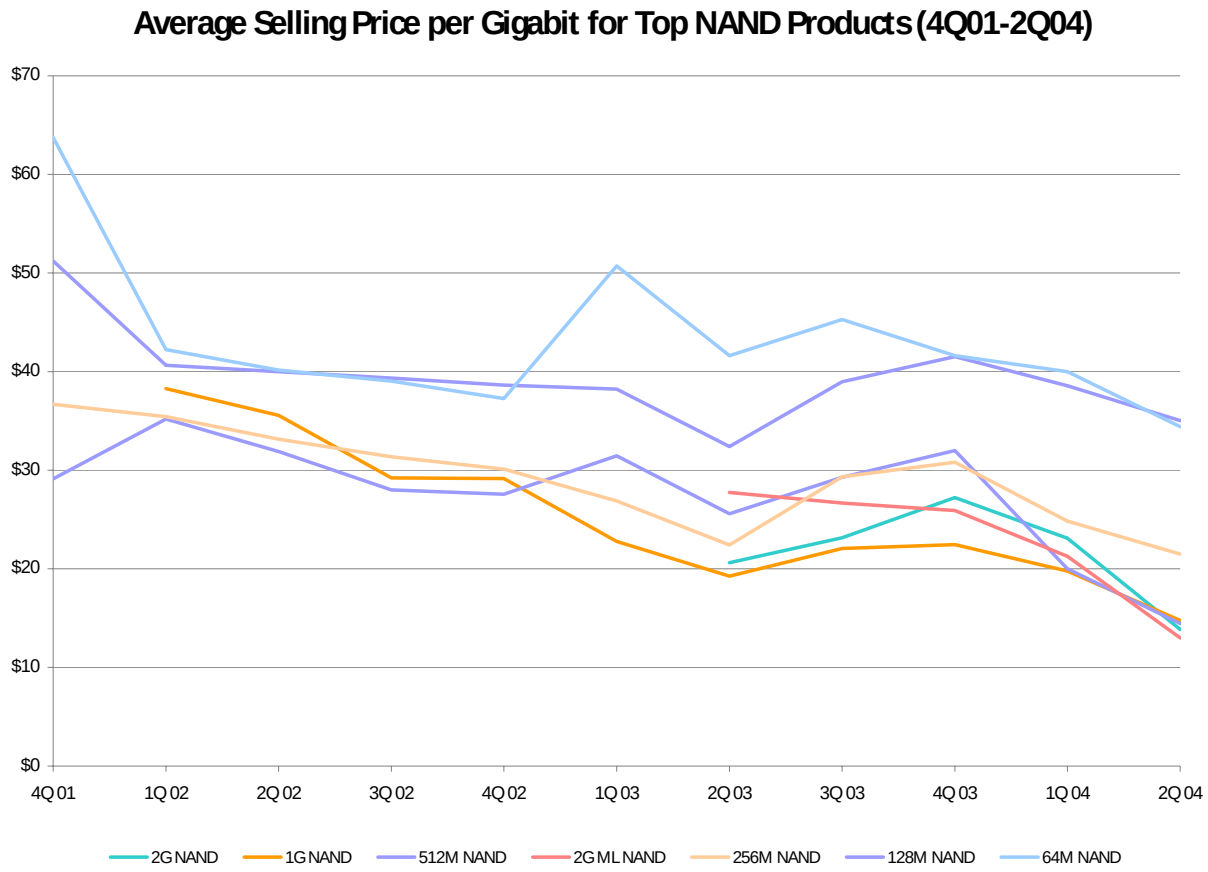

96. The tight NAND flash memory capacity situation continued throughout much of the first half of 2004, but beginning in September of 2004, NAND flash memory average contract prices by density increased by 12 percent and spot prices increased by 15 percent, following price hikes by Samsung. Samsung engaged in such price hikes, despite the fact that Hynix was increasing its presence in the market. This indicates that Samsung was not seriously concerned about any possible competition from Hynix. In the latter part of the year, there was a shortage for 2Gb and 4Gb NAND flash memory components manufactured by Samsung and Toshiba, which caused some stabilization of NAND flash memory prices.

97. The shortage in NAND flash memory supply continued in the first four months of 2005, with respect to most densities. Samsung and Toshiba continued to cause prices to be fairly stable, as reflected in the following chart showing contract prices:

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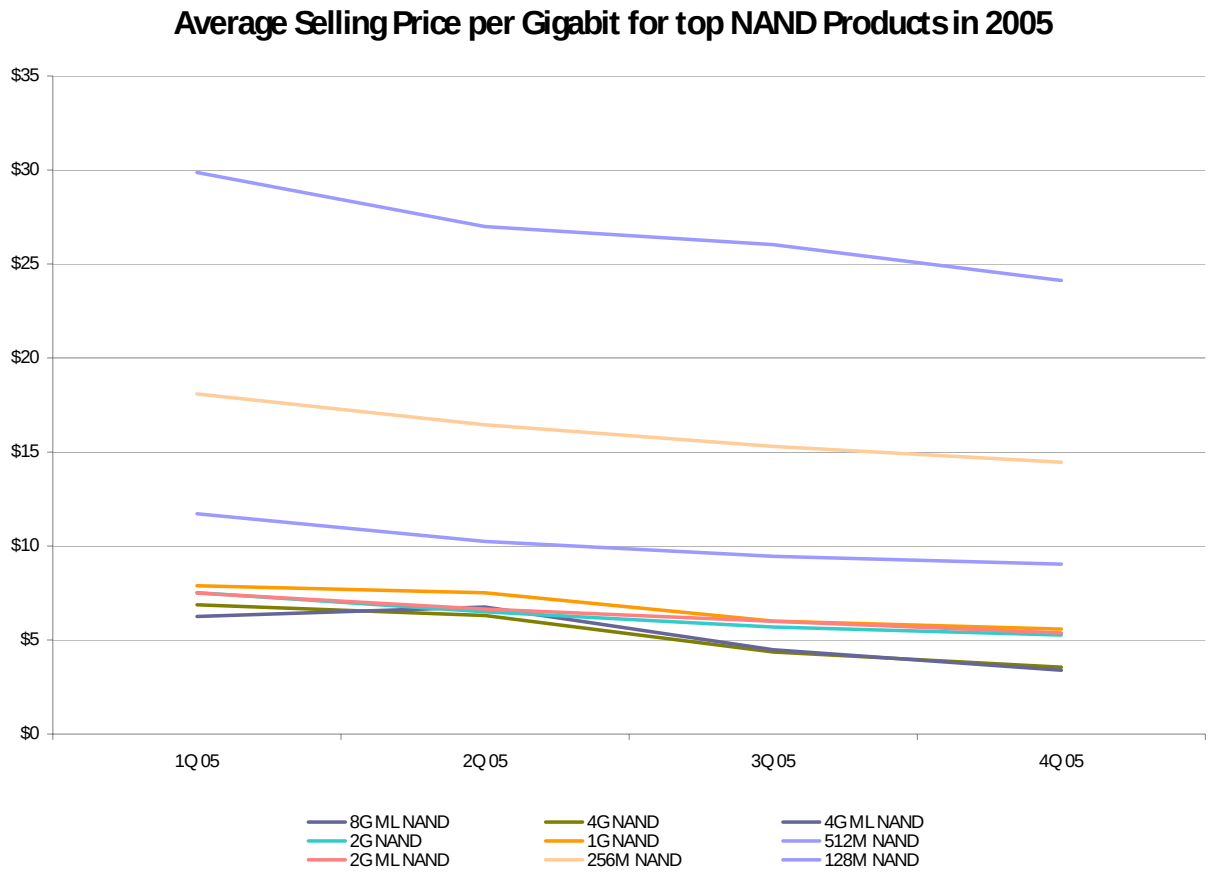
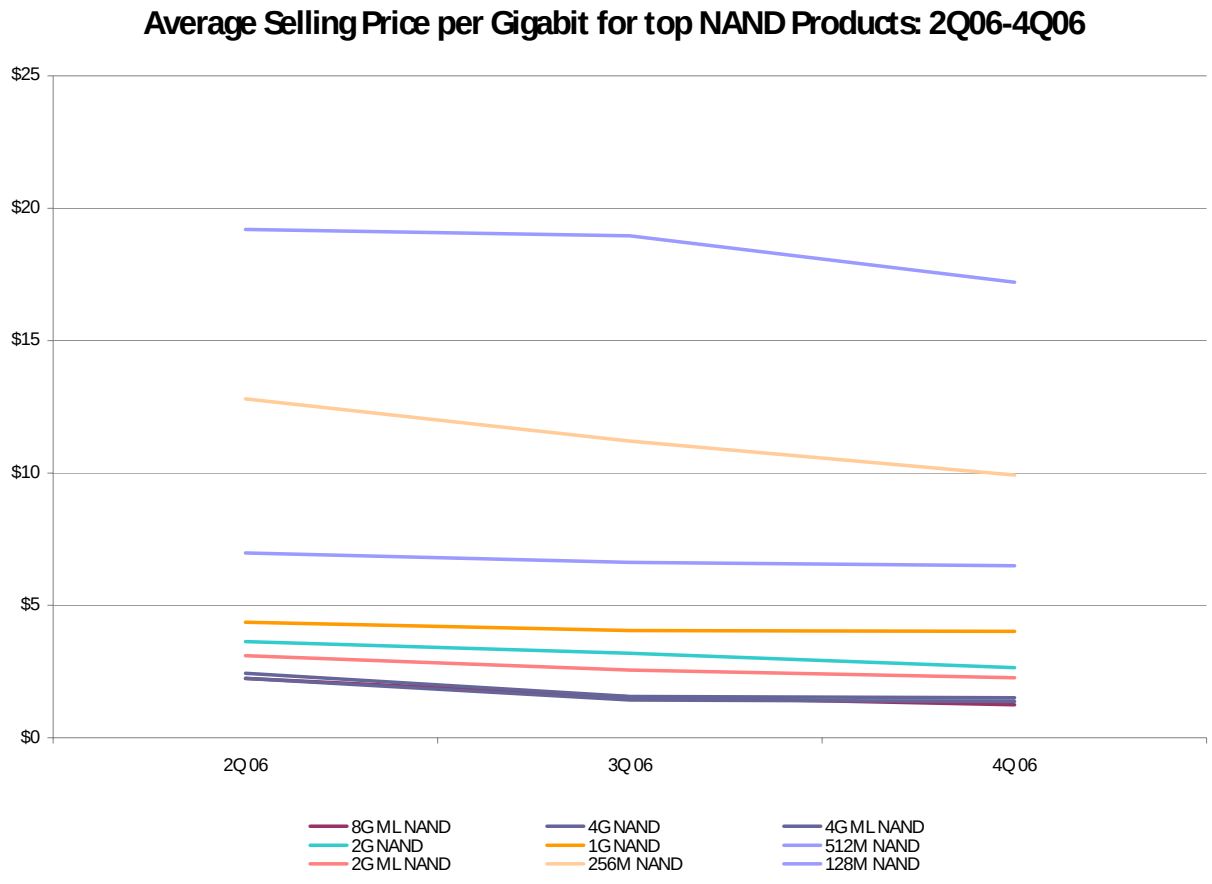


98. While there was a slight oversupply at the commencement of the third quarter of 2005, Samsung and Toshiba jointly restricted supply in July of 2005 and began placing second and third tier customers on allocation. This tight supply situation led to increased spot prices continuing into the fourth quarter. One analyst who reviewed spot prices for NAND flash memory pricing for the month of October of 2005 found that spot prices increased 11 percent for 8Gb units, 24 percent for 4Gb units, 32 percent for 2Gb units, and 22 percent for 1Gb. Each of these spot price increases was attributed to supply shortages, which was a pretextual excuse to cover up the conspiracy. The shortages were artificial and used to support the price of NAND flash memory.

99. These price increases produced enormous profits for Defendants. In 2005, the NAND flash memory businesses of Samsung, Toshiba and Hynix collectively generated more than $6 billion in operating profits. SanDisk posted an operating margin exceeding 25 percent during the fourth quarter of 2005.

100. The situation changed somewhat in 2006 due in part to weaker demand in some consumer sectors and an excess of Apple iPods from the 2005 holiday season. But even during this period, efforts were made to increase prices on NAND flash memory, as evidenced by near-simultaneous price increase announcements from Samsung and Hynix on May 9, 2006. These efforts slowed the normal and expected double-digit quarter over quarter decline in average sales prices. The relative stability of NAND flash memory contract pricing during this period is illustrated below:



4. Intercompetitor Contacts and Pricing During 2007

101. During the first few months of 2007, spot prices for NAND flash memory continued to fall across all densities, but, as alleged above, the Defendants were making efforts during the last quarter of 2006 to reduce NAND supply relative to expected demand growth.

102. In March of 2007, Samsung made analyst presentations at a Merrill Lynch conference and at a Credit-Suisse conference saying that it had "[s]tabilized price erosion from March 2007" thanks to "[s]upply constraints due to cautious supply…." Both presentations noted the "supply constraint" in NAND flash memory and said that in the second half of 2007, "[s]evere shortage expected with strong recovery of margin." In the absence of inside knowledge of what its competitors planned to do, Samsung would have no way of making such a confident prediction.

103. In the latter half of March 2007, a trade publication based in Taipei, Taiwan stated that "[s]ince late February, positive means regarding the NAND flash industry started spreading. Some industry players started seeing leading players, including Samsung Electronics and Hynix Semiconductor, stop reducing their quotes and hold firm in price negotiations. Later, some memory module houses…started foreseeing a shortage in the second quarter." A few days later, the same publication ran an article reflecting a discussion with Chang-Gyu Hwang, President of Samsung's semiconductor business since 2000. That article stated, "Samsung has previously mentioned that fellow memory makers who adopt a more cautious approach to expansion over NAND flash are also another reason for stabilizing the industry trend. The memory maker observed that major NAND flash suppliers have all reduced their capacity." Thus, it is clear that this reduction in capacity was one carried out by all of the leading NAND flash memory manufacturers. Another article from the same date indicated that Hwang was "very bullish on flash prices in the second half of the year."

104. These parallel supply reductions by major manufacturers of NAND flash memory were the product of collusion. In late March of 2007, reports circulated that Samsung and Hynix had agreed to restrain production of NAND flash memory. One industry analyst noted that "[t]o say there's a fundamental issue with supply in the NAND-flash base is ludicrous…Capacity was artificially manipulated to firm pricing during a weak first quarter."

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105. Another source quoted Gartner, Inc., an industry analyst, as saying: "some [NAND flash memory] supply is being deliberately held back in inventory." This same source ended his discussion with the question, "[i]s there a conspiracy in NAND?" At the same time, Nam Hyung Kim, an analyst for iSuppli, was quoted as saying that "'[t]he South Korean suppliers, Samsung Electronics Co. Ltd. and Hynix Semiconductor Inc., are decelerating their NAND production growth, leading to a more balanced supply/demand situation and firmer pricing in the market.'" According to Kim, Hynix and Samsung started migrating production in the fourth quarter of 2006 from NAND flash memory to DRAM, causing a significant decline of excess NAND flash memory supply and surplus inventory in the supply chain.

106. Also in late March, Hynix and Toshiba announced that they had entered into the cross-licensing agreements described earlier. O.C. Kwon, Senior Vice-President of Hynix, stated: "[w]e believe that the agreements will become a good foundation for our two companies to build a mutually beneficial business relationship in the future." Shozo Saito, Corporate Vice-President and Executive Vice-President, Semiconductor Company, Toshiba Corporation, echoed that sentiment, stating: "through these agreements, we can now strengthen our respective businesses."

107. The agreements between Hynix and Toshiba were followed one day later by the announcement of agreements between Hynix and Toshiba's joint venture partner, SanDisk, to cross license their respective NAND intellectual property. Within days of the agreements between Hynix, Toshiba, and SanDisk, and the contemporaneous comments made by Samsung, NAND contract prices began to increase.

108. As a result of Defendants' collusion, contract prices for MLC and SLC NAND flash memory turned around substantially beginning in the latter part of March of 2007. Contract prices reported by DRAMeXchange, a market research firm that publishes pricing information for the memory industry, illustrate the following pricing trend:

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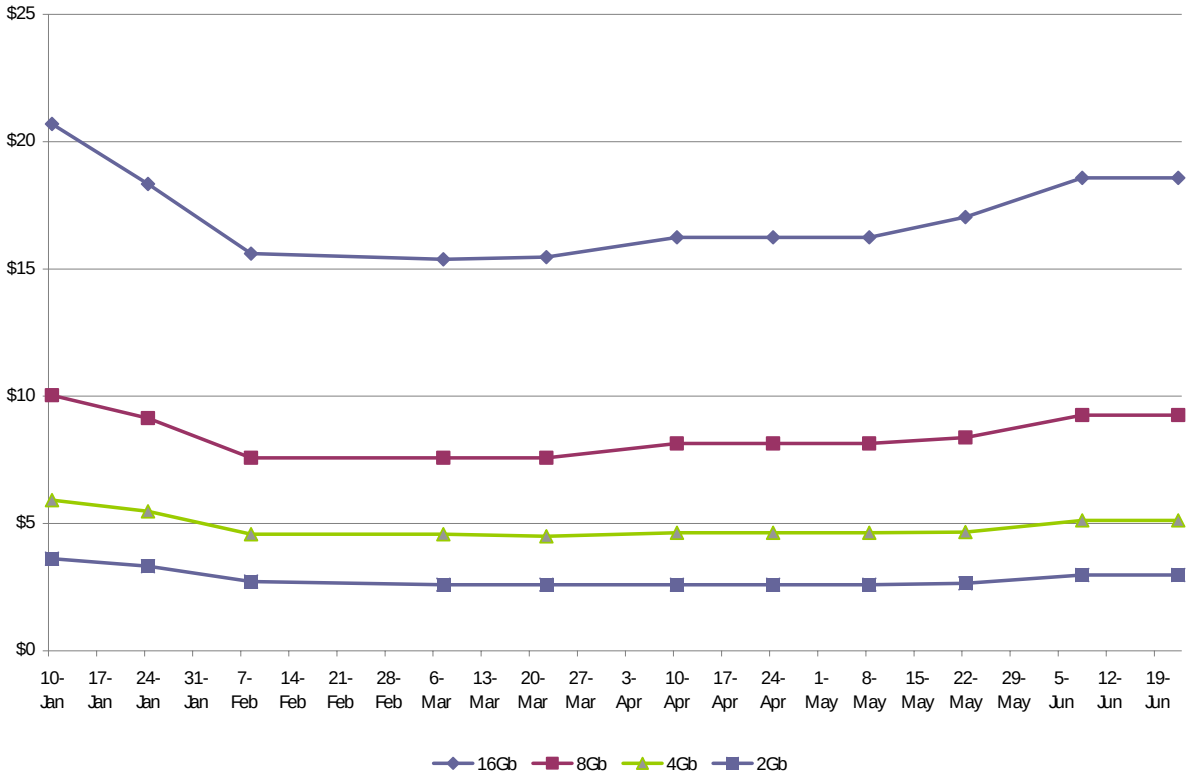
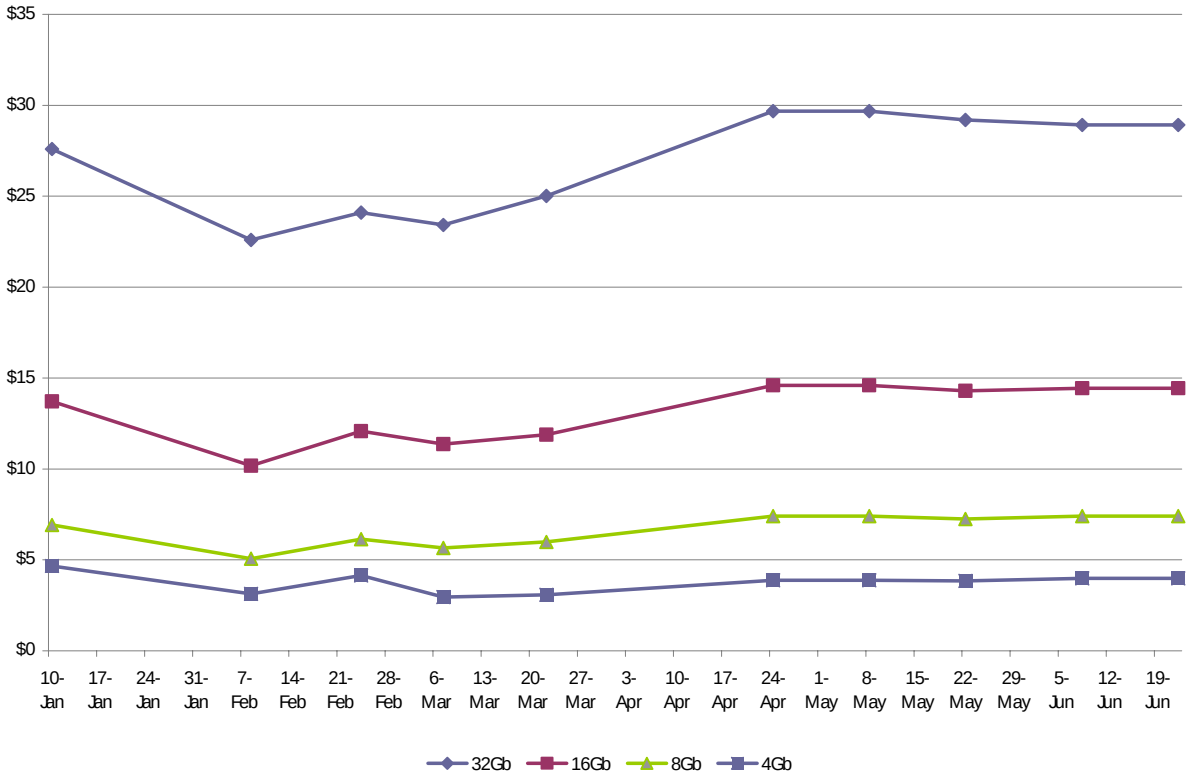
Mainstream SLC NAND Flash Memory Contract Prices, 2007



Mainstream MLC NAND Flash Memory Contract Prices, 2007



109. Spot prices for NAND flash memory also turned around during this period. The following chart depicts prices reported by DRAMeXchange for the March 27 to April 3 period.

Mainstream NAND Flash Memory Spot Prices, 2007 (US$)

Type	March 27	April 3	Change
32Gb (4Gb×8)-SLC	$46.43	$46.43	0.00%
32Gb (4Gb×8)-MLC	$28.36	$30.63	8.00%
16Gb (2Gb×8)-SLC	$15.86	$17.52	10.47%
16Gb (2Gb×8)-MLC	$14.75	$17.30	17.29%
8Gb (1024Mb×8)-SLC	$8.34	$9.32	11.75%
8Gb (1024Mb×8)-MLC	$8.14	$9.31	14.37%
4Gb (512Mb×8)-SLC	$4.71	$5.22	10.83%
4Gb (512Mb×8)-MLC	$3.89	$4.53	16.45%
2Gb (256Mb×8)-SLC	$2.49	$2.56	2.81%
1Gb (128Mb×8)-SLC	$2.30	$2.34	1.74%

110. A similar chart depicts continued spot price increase in June of 2007:

NAND Flash Memory Spot Prices, 2007 (US$)

Type	July 9	July 16	Change
1Gb	$2.81	$3.13	11.4%
2Gb	$4.82	$5.61	16.4%
4Gb	$8.41	$9.23	9.8%
8Gb	$10.90	$11.05	1.4%
16Gb	$20.73	$21.32	2.8%

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111. Spot prices continued to increase in August of 2007:

NAND Flash Memory Spot Prices, 2007 (US$)

Type	July 30	August 6	Change
2Gb	$4.09	$5.13	25.4%
4Gb	$7.30	$7.86	7.7%
8Gb	$12.17	$15.90	30.6%
16Gb	$20.74	$22.03	6.2%

112. By early August of 2007, Samsung raised its NAND flash memory price quotations to its contract customers by 20 percent and indicated it would not be providing any discounts to those customers.

113. As the foregoing data reflect, these prices increases were not limited to Samsung. On September 26, 2007, Toshiba reported that it was unable to meet demand for NAND flash memory and was sold out until December.

114. These price increases were driven not by demand, but by supply constraints engineered collusively by Defendants.

E. International Antitrust Investigation Announced in September of 2007

115. On September 14, 2007, SanDisk indicated in a Form 8-K filed with the Securities & Exchange Commission that it had received subpoenas from the federal district court in the Northern District of California in connection with a grand jury investigation into possible antitrust violations in the NAND flash memory market. It also indicated that it had received notices from the Canadian Competition Bureau ("CCB") of "an industry-wide investigation with respect to alleged anti-competitive activity" in that market.

116. A DOJ spokesperson has confirmed that it is conducting an antitrust investigation into NAND flash memory. Likewise, John Pecman, an assistant deputy commissioner in the criminal matters branch of the CCB confirmed the existence of an investigation. He was quoted as saying: "[w]e have sent target letters to a number of industry participants to let them know that we're also investigating. Given the

international scope of the industry, we try to work in parallel with other international agencies."

117. In subsequent press reports, Toshiba, Renesas, and Samsung all confirmed that they or their U.S. subsidiaries had received grand jury subpoenas. Hynix's spokesperson declined to comment. An analyst at Needham & Co. in San Francisco reacted to the news by stating: "I'm not surprised by the action, given recent investigations into SRAM and DRAM." Nam Hyung Kim, the analyst at iSuppli mentioned earlier, was quoted as saying that "most suppliers mentioned are DRAM makers who should have learned the lesson of the price-fixing case."

118. It is significant that Defendants' anticompetitive behavior has been the subject of a criminal grand jury investigation by the DOJ. In order for the DOJ to institute a grand jury investigation, a DOJ Antitrust Division attorney must believe that a crime has been committed and prepare a detailed memo to that effect. *See Antitrust Grand Jury Practice Manual*, Vol. 1, Ch. I.B.1 ("[i]f a Division attorney believes that a criminal violation of the antitrust laws has occurred, he should prepare a memorandum requesting authority to conduct a grand jury investigation.") Furthermore, following a review of the memorandum, the request for a grand jury must be approved by the Assistant Attorney General for the Antitrust Division, based on the standard that a criminal violation may have occurred. *See id*. In addition, the fact that the DOJ Antitrust Division investigation is criminal, as opposed to civil, is significant as well. The Antitrust Division's "Standards for Determining Whether to Proceed by Civil or Criminal Investigation" state: "[i]n general, current Division policy is to proceed by criminal investigation and prosecution in cases involving horizontal, per se unlawful agreements such as price fixing, bid rigging and horizontal customer and territorial allocations." *See Antitrust Division Manual*, Chapter III.C.5. Accordingly, the existence of a criminal investigation into the flash memory industry supports the existence of the conspiracy alleged herein.

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VIII. FRAUDULENT CONCEALMENT

119. Plaintiff and members of the Class did not discover and could not have discovered, through the exercise of reasonable diligence, the existence of the conspiracy alleged herein until 2007 because Defendants and their co-conspirators actively and fraudulently concealed the existence of their contract, combination or conspiracy. The existence of a potential conspiracy to fix the prices of NAND flash memory was not confirmed until the announcement of an international price-fixing investigation in September of 2007.

120. Because the Defendants' agreement, understanding, and conspiracy was kept secret, Plaintiff and Class members were unaware of the unlawful conduct alleged herein and did not know that they were paying artificially high prices for NAND flash memory.

121. The affirmative acts of the Defendants alleged herein, including acts in furtherance of the conspiracy, were wrongfully concealed and carried out in a manner that precluded detection.

122. By its very nature, Defendants' price-fixing conspiracy was inherently self-concealing.

123. Plaintiff and the Class members could not have discovered the alleged contract, conspiracy or combination at an earlier date by the exercise of reasonable diligence because of the deceptive practices and techniques of secrecy employed by Defendants and their co-conspirators to avoid detection of, and fraudulently conceal, their contract, conspiracy or combination. The contract, conspiracy or combination as herein alleged was fraudulently concealed by Defendants by various means and methods, including, but not limited to, secret meetings, surreptitious communications between the Defendants by the use of the telephone or in-person meetings at trade association meetings (and elsewhere) in order to prevent the existence of written records, limiting any explicit reference to competitor pricing communications on documents (including e-mails), warning each other when they mistakenly made explicit references to competitor communications in documents (including e-mails), falsifying expense records to conceal

meetings with competitors, and concealing the existence and nature of their competitor pricing discussions from non-conspirators (including customers).

124. As an example of the foregoing, Ken Heller, Director of Eastern Area Sales for Hynix's U.S. subsidiary (who is still employed by Hynix), sent an e-mail on March 2, 2001 to Jay McBroom, the company's Director of Central Area Sales (who is also still employed at Hynix), saying "[j]ust fyi, pls consider NEVER making statement in email that you spoke with competition. Lawyers love these baby's. Just state 'I heard from dependable source'...."

125. Heller made a similar oral comment to Paul Polonsky, Strategic Account Manager for Hynix's U.S. subsidiary, saying Palonsky should not say that "I spoke to my competitor" but instead should say that "I heard." Heller and Palonsky had both been at Toshiba before joining Hynix. Palonsky said that while serving at Toshiba, he learned to conceal meetings with competitors in his expense reports by falsely attributing expenses to meetings with customers.

126. As another example, on May 24, 1999, D.W. Kim of Hynix wrote to C.K. Chung of Hynix suggesting the use of a third party as a conduit for competitor pricing information because "one of our concerns is that it is against the antitrust law to set up a certain cartel price…."

127. Defendants also falsely attributed price increases to increased demand, shortages in supply, increased manufacturing costs, increased prices of labor and raw materials, insufficient production capacity, tightening market conditions, and/or insufficient production capacity. An example of this practice is alleged in paragraph 98 above. Defendants and their co-conspirators also fraudulently informed their customers that they were unable to sell their product at a lower price due to these reasons.

128. Plaintiff had no reason to disbelieve these statements. Furthermore, the majority of the explanations provided by Defendants involved non-public and/or proprietary information completely in Defendants' control such that Plaintiff and members of the Class could not verify their accuracy. Defendants' purported reasons for the price

increases of NAND flash memory were materially false and misleading and were made for the purpose of concealing Defendants' anti-competitive scheme as alleged herein. In truth, at all relevant times, the price of NAND flash memory was artificially inflated and maintained as a direct result of the Defendants' anti-competitive scheme, the operation of which was a substantial, but undisclosed, factor in the pricing of NAND flash memory during the Class Period.

129. As a result of Defendants' fraudulent concealment of their conspiracy, the running of any statue of limitations has been tolled with respect to any claims that Plaintiff and the Class members have as a result of the anticompetitive conduct alleged in this complaint.

IX. CAUSE OF ACTION

130. Plaintiff incorporates and re-alleges each allegation set forth in the preceding paragraphs of this Complaint.

131. Beginning at least as early as January 1, 1999, and continuing to the present, Defendants and their co-conspirators, by and through their officers, directors, employees, agents, or other representatives, entered into a continuing agreement, understanding, and conspiracy in restraint of trade to artificially raise, fix, maintain, and/or stabilize prices for NAND flash memory in the United States in violation of Section 1 of the Sherman Act (15 U.S.C. § 1).

132. In formulating and carrying out the alleged conspiracy, the Defendants and their co-conspirators perpetrated the acts which they combined and conspired to do, including, but not limited to:

a. fixing, raising, maintaining, and stabilizing the price of NAND flash memory;

b. allocating production of NAND flash memory; and

c. restricting output of NAND flash memory.

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133. The conspiracy's effects include, but are not limited to:

a. price competition in the sale of NAND flash memory has been restrained, suppressed and/or eliminated in the United States;

b. prices for NAND flash memory sold by Defendants and their co-conspirators have been raised, fixed, maintained and stabilized at artificially high and noncompetitive levels throughout the United States; and

c. direct purchasers of NAND flash memory from Defendants and their co-conspirators have been deprived of the benefits of free and open competition.

134. As a direct result of the unlawful conduct of Defendants and their co-conspirators, Plaintiff and members of the Class have been injured in their business and property because they have paid more for NAND flash memory purchased directly from Defendants and their co-conspirators than they would have paid in the absence of the conspiracy.

135. Plaintiff and the Class are entitled to treble damages and an injunction against Defendants preventing and restraining the violations alleged herein.

X. PRAYER FOR RELIEF

WHEREFORE, Plaintiff prays:

A. That the Court determine that the Sherman Act claim alleged herein may be maintained as a class action under Rule 23(a) and 23(b)(3) of the Federal Rules of Civil Procedure;

B. That the conduct, contract, conspiracy, or combination alleged herein be adjudged and decreed to be an unreasonable restraint of trade or commerce in violation of Section 1 of the Sherman Act (15 U.S.C. § 1);

C. That Plaintiff and the Class recover damages, as provided by federal antitrust law, and that a joint and several judgment in favor of Plaintiff and the Class be entered against Defendants in an amount to be trebled in accordance with such laws;

D. That Defendants, their affiliates, successors, transferees, assignees, and the officers, directors, partners, agents, and employees thereof, and all other persons acting or claiming to act on their behalf, be permanently enjoined and restrained from in any manner: (a) continuing, maintaining, or renewing the conduct, contract, conspiracy, or combination alleged herein, or from entering into any other conspiracy alleged herein, or from entering into any other contract, conspiracy, or combination having a similar purpose or effect, and from adopting or following any practice, plan, program, or device having a similar purpose or effect; and (b) communicating or causing to be communicated to any other person engaged in the sale of NAND flash memory, information concerning bids of competitors.

E. That Plaintiff and the Class be awarded pre- and post-judgment interest, and that that interest be awarded at the highest legal rate from and after the date of service of the initial Complaint in this action;

F. That Plaintiff and the Class recover the costs of this suit, including reasonable attorneys' fees, as provided by law; and

G. That Plaintiff and the Class be granted such other, further, and different relief as this case may require or as this Court may deem just, equitable and proper.

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JURY DEMAND

Plaintiff demands a jury trial, pursuant to Federal Rule of Civil Procedure 38(b), of all triable issues.

Dated: February 7, 2008

By: /s/ Guido Saveri

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