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ENDORSED
FILED
Superior Court of California
County of San Francisco

FEB - 4 2009

GORDON PARK-LI, Clerk
MARIA SANCHEZ
Deputy Clerk
BY: _____

22 SUPERIOR COURT OF CALIFORNIA
23 COUNTY OF SAN FRANCISCO
24

25 CITY OF LOS ANGELES, ALAMEDA
26 COUNTY, ANAHEIM CITY SCHOOL
DISTRICT, BELLFLOWER UNIFIED
27 SCHOOL DISTRICT, CAPISTRANO
UNIFIED SCHOOL DISTRICT, CITY OF
28 BAKERSFIELD, CITY OF BURBANK,
CITY OF CHULA VISTA, CITY OF

Case No.: CGC-08-480561
FIRST AMENDED COMPLAINT FOR
DAMAGES BASED ON:
(1) VIOLATIONS OF THE
CARTWRIGHT ACT (Bus. & Prof. Code

1 FREMONT, CITY OF FRESNO, CITY OF
2 GLENDALE, CITY OF HAYWARD, CITY
3 OF HUNTINGTON BEACH, CITY OF
4 IRVINE, CITY OF LONG BEACH, CITY
5 OF MILPITAS, CITY OF OAKLAND,
6 CITY OF OCEANSIDE, CITY OF
7 ONTARIO, CITY OF ORANGE, CITY OF
8 OXNARD, CITY OF PASADENA, CITY
9 OF POMONA, CITY OF RANCHO
10 CUCAMONGA, CITY OF SALINAS, CITY
11 OF SAN BERNARDINO, CITY OF SAN
12 DIEGO, CITY OF SAN JOSE, CITY OF
13 SANTA ANA, CITY OF SANTA CRUZ,
14 CITY OF SANTA MONICA, CITY OF
15 SANTA ROSA, CITY OF SIMI VALLEY,
16 CITY OF SOLEDAD, CITY OF
17 STOCKTON, CITY OF SUNNYVALE,
18 CITY OF TORRANCE, CONTRA COSTA
19 COUNTY, CORONA-NORCO UNIFIED
20 SCHOOL DISTRICT, EAST BAY
21 MUNICIPAL UTILITY DISTRICT
22 (EBMUD), EAST SIDE UNION SCHOOL
23 DISTRICT, EL DORADO COUNTY, ELK
24 GROVE UNIFIED SCHOOL DISTRICT,
25 FAIRFIELD-SUISUN JT UNIFIED
26 SCHOOL DISTRICT, FRESNO COUNTY,
27 FRESNO UNIFIED SCHOOL DISTRICT,
28 GARDEN GROVE UNIFIED SCHOOL
DISTRICT, GLENN COUNTY,
GROSSMONT UNIFIED SCHOOL
DISTRICT, IMPERIAL COUNTY,
IMPERIAL IRRIGATION DISTRICT,
JOHN C. FREMONT HEALTHCARE
DISTRICT, KERN COUNTY, KERN
HIGH SCHOOL DISTRICT, KINGS
COUNTY, LA HABRA CITY SCHOOL
DISTRICT, LAKE COUNTY, LOS
ANGELES COUNTY, MADERA
COUNTY, MARIN COUNTY,
MCFARLAND UNIFIED SCHOOL
DISTRICT, MENDOCINO COUNTY,
MERCED COUNTY, METROPOLITAN
WATER DISTRICT OF SOUTHERN
CALIFORNIA, MONTEREY COUNTY,
NAPA COUNTY, NORWALK LA
MIRADA UNIFIED SCHOOL DISTRICT,
OAKLAND UNIFIED SCHOOL
DISTRICT, ORANGE COUNTY,
PALOMAR POMERADO HEALTH,
PLACER COUNTY, SACRAMENTO
CITY UNIFIED SCHOOL DISTRICT,
SACRAMENTO COUNTY,
SACRAMENTO MUNICIPAL UTILITY
DISTRICT (SMUD), SAN DIEGO CITY
UNIFIED SCHOOL DISTRICT, SAN

§§ 16720, et seq.)

(2) VIOLATIONS OF THE UNFAIR
COMPETITION ACT (Bus. & Prof. Code
§§ 17200, et seq.)

(3) UNJUST ENRICHMENT

DEMAND FOR JURY TRIAL

1 FRANCISCO BAY AREA RAPID
2 TRANSIT DISTRICT (BART), SAN
3 FRANCISCO UNIFIED SCHOOL
4 DISTRICT, SAN JOAQUIN COUNTY,
5 SAN JOSE UNIFIED SCHOOL
6 DISTRICT, SAN JUAN UNIFIED
7 SCHOOL DISTRICT, SAN LUIS OBISPO
8 COUNTY, SAN MARINO UNIFIED
9 SCHOOL DISTRICT, SAN MATEO
10 COUNTY, SANTA ANA UNIFIED
11 SCHOOL DISTRICT, SANTA BARBARA
12 COUNTY, SANTA CLARA VALLEY
13 TRANSPORTATION AUTHORITY,
14 SANTA CRUZ COUNTY, SHASTA
15 COUNTY, SOLANO COUNTY, SONOMA
16 COUNTY, STANISLAUS COUNTY,
17 SUTTER COUNTY, SWEETWATER
18 UNION HIGH SCHOOL DISTRICT, THE
19 REGENTS OF THE UNIVERSITY OF
20 CALIFORNIA, TULARE COUNTY,
21 VENTURA COUNTY, YOLO COUNTY,
and YUBA COUNTY,

Plaintiffs,

v.

14 INFINEON TECHNOLOGIES AG;
15 INFINEON TECHNOLOGIES NORTH
16 AMERICA CORP.; HYNIX
17 SEMICONDUCTOR, INC.; HYNIX
18 SEMICONDUCTOR AMERICA, INC.;
19 MICRON TECHNOLOGY, INC.;
20 MICRON SEMICONDUCTOR
21 PRODUCTS, INC.; MOSEL VITELIC,
INC.; MOSEL VITELIC CORP.; NANYA
TECHNOLOGY CORPORATION;
NANYA TECHNOLOGY CORPORATION
USA, INC.; ELPIDA MEMORY, INC.;
ELPIDA MEMORY (USA) INC.; NEC
ELECTRONICS AMERICA, INC.; DOES 1
THROUGH 100 INCLUSIVE;

Defendants.

I. INTRODUCTION

1. This action arises from indictments of and admissions of guilt by members of a cartel to fix the price of dynamic random access memory ("DRAM"). United States Department of Justice officials called the DRAM price fixing agreement "one of the largest cartels ever discovered." DRAM stores information temporarily for quick access by a Computer or other

1 product. DRAM is an essential component of Computers, Printers, and Networking equipment.

2 2. Plaintiffs are political subdivisions and public agencies in the state of California.
3 Plaintiffs purchased DRAM separately or as part of other products. The amount of DRAM in
4 such products was a substantial factor in Plaintiffs' purchasing decisions. By raising the price of
5 DRAM, defendants caused consumers of DRAM Containing Products either to pay more for
6 those products or to receive less DRAM in those products than otherwise in order to pay the same
7 price for DRAM Containing Products.

8 II. JURISDICTION AND VENUE

9 3. This Court has subject matter jurisdiction over all causes of action alleged in this
10 Complaint pursuant to the California Constitution, Article VI, § 10, and is a Court of competent
11 jurisdiction to grant the relief requested. Plaintiffs' claims for violation of Business &
12 Professions Code §§ 16720, et seq. and 17200, et seq. and unjust enrichment, arise under the laws
13 of the State of California, are not preempted by federal law, do not challenge conduct within any
14 federal agency's exclusive domain, and are not statutorily assigned to any other trial court.

15 4. Each defendant transacts business and has agents in the State of California. The
16 unlawful conduct pursuant to or in furtherance of the combination or conspiracy occurred in
17 substantial part within the State of California and was intended to and did substantially effect
18 business and commerce within this State.

19 5. Venue is proper in this Court pursuant to California Code of Civil Procedure
20 Sections 395 and 395.5, and California Business & Professions Code Section 16750. Defendants
21 conduct substantial business in the County of San Francisco. The acts upon which this action is
22 based occurred in part in the County of San Francisco. The injuries that have been sustained as a
23 result of Defendants' illegal conduct occurred in part in the County of San Francisco.

24 III. DEFINITIONS

25 6. "Dynamic Random Access Memory" ("DRAM") means semiconductor memory
26 chips providing high-speed storage and retrieval of electronic information for electronic devices,
27 such as personal Computers and servers. These memory chips are used to store data in a wide
28 variety of computing and other electronic devices while the device is in operation. DRAM is

1 called "dynamic" because it must have its information refreshed, or recharged electronically,
2 every few milliseconds. DRAM as used in Computers consists of individual chips, or discrete
3 industry-standard or proprietary modules which are available in a number of standard memory
4 sizes, e.g., 128, 256, or 512 megabytes ("MB"), that incorporates multiple DRAM chips and
5 support circuitry onto a printed circuit. DRAM includes, but is not limited to, Synchronous
6 Dynamic Random Access Memory ("SDRAM") and Double Data Rate Dynamic Random Access
7 Memory ("DDR") chips. DDR & SDRAM chips are high-speed, high-performance types of
8 DRAM chips.

9 7. "DRAM Containing Products" means Computer, Printer, and Networking
10 Equipment as those terms are defined in this Complaint.

11 8. "Computer" means desktops, laptops (or notebooks), servers, workstations and
12 super computers. The term "Computers" excludes special purposes devices such as PDAs, cell
13 phones, telecommunications devices, set-top boxes, home appliances, game machines, Printers,
14 copiers, or facsimile machines.

15 9. "Printer" means a Computer output device used to produce hard copies of
16 documents stored in electronic form and includes laser, inkjet, plotters, dot matrix, dye
17 sublimation, and inkless devices.

18 10. "Networking Equipment" means devices that control the transfer of data in
19 Computer networks, including routers, switches, repeaters, bridges, and firewalls.

20 11. "Original Equipment Manufacturer" ("OEM") means any original equipment
21 manufacturer of DRAM Containing Products. OEMs include, but are not limited to, Apple
22 Computer, Inc.; Compaq Computer Corp.; Dell Inc.; Gateway Inc.; Hewlett-Packard; and
23 International Business Machines Corp. ("IBM").

24 12. "Hub" means any supply warehouse located adjacent to OEM integration
25 facilities, administered by a third party. Hubs allow OEMs to draw parts, including DRAM, for
26 integration into DRAM Containing Products as needed.

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IV. THE PARTIES

Plaintiffs

13. Plaintiffs are all political subdivisions or public agencies in the state of California that purchased DRAM separately or as part of other products. The Plaintiffs are:

- (1) Plaintiff Alameda County;
- (2) Plaintiff Anaheim City School District;
- (3) Plaintiff Bellflower Unified School District;
- (4) Plaintiff Capistrano Unified School District;
- (5) Plaintiff City of Bakersfield;
- (6) Plaintiff City of Burbank;
- (7) Plaintiff City of Chula Vista;
- (8) Plaintiff City of Fremont;
- (9) Plaintiff City of Fresno;
- (10) Plaintiff City of Glendale;
- (11) Plaintiff City of Hayward;
- (12) Plaintiff City of Huntington Beach;
- (13) Plaintiff City of Irvine;
- (14) Plaintiff City of Long Beach;
- (15) Plaintiff City of Los Angeles;
- (16) Plaintiff City of Milpitas;
- (17) Plaintiff City of Oakland;
- (18) Plaintiff City of Oceanside;
- (19) Plaintiff City of Ontario;
- (20) Plaintiff City of Orange;
- (21) Plaintiff City of Oxnard;
- (22) Plaintiff City of Pasadena;
- (23) Plaintiff City of Pomona;
- (24) Plaintiff City of Rancho Cucamonga;

- 1 (25) Plaintiff City of Salinas
- 2 (26) Plaintiff City of San Bernardino;
- 3 (27) Plaintiff City of San Diego;
- 4 (28) Plaintiff City of San Jose;
- 5 (29) Plaintiff City of Santa Ana;
- 6 (30) Plaintiff City of Santa Cruz;
- 7 (31) Plaintiff City of Santa Monica;
- 8 (32) Plaintiff City of Santa Rosa;
- 9 (33) Plaintiff City of Simi Valley;
- 10 (34) Plaintiff City of Soledad;
- 11 (35) Plaintiff City of Stockton;
- 12 (36) Plaintiff City of Sunnyvale;
- 13 (37) Plaintiff City of Torrance;
- 14 (38) Plaintiff Contra Costa County;
- 15 (39) Plaintiff Corona-Norco Unified School District;
- 16 (40) Plaintiff East Bay Municipal Utility District (EBMUD);
- 17 (41) Plaintiff East Side Union School District;
- 18 (42) Plaintiff El Dorado County;
- 19 (43) Plaintiff Elk Grove Unified School District;
- 20 (44) Plaintiff Fairfield-Suisun Joint Unified School District;
- 21 (45) Plaintiff Fresno County;
- 22 (46) Plaintiff Fresno Unified School District;
- 23 (47) Plaintiff Garden Grove Unified School District;
- 24 (48) Plaintiff Glenn County;
- 25 (49) Grossmont Unified School District
- 26 (50) Plaintiff Imperial County;
- 27 (51) Plaintiff Imperial Irrigation District;
- 28 (52) Plaintiff John C. Fremont Healthcare District;

- 1 (53) Plaintiff Kern County;
- 2 (54) Plaintiff Kern High School District;
- 3 (55) Plaintiff Kings County;
- 4 (56) Plaintiff La Habra City School District;
- 5 (57) Plaintiff Lake County;
- 6 (58) Plaintiff Los Angeles County;
- 7 (59) Plaintiff Madera County;
- 8 (60) Plaintiff Marin County;
- 9 (61) Plaintiff Mcfarland Unified School District;
- 10 (62) Plaintiff Mendocino County;
- 11 (63) Plaintiff Merced County;
- 12 (64) Plaintiff Metropolitan Water District of Southern California;
- 13 (65) Plaintiff Monterey County;
- 14 (66) Plaintiff Napa County;
- 15 (67) Plaintiff Norwalk La Mirada Unified School District;
- 16 (68) Plaintiff Oakland Unified School District;
- 17 (69) Plaintiff Orange County;
- 18 (70) Plaintiff Palomar Pomerado Health;
- 19 (71) Plaintiff Placer County;
- 20 (72) Plaintiff Sacramento City Unified School District;
- 21 (73) Plaintiff Sacramento County;
- 22 (74) Plaintiff Sacramento Municipal Utility District (SMUD);
- 23 (75) Plaintiff San Diego City Unified School District;
- 24 (76) Plaintiff San Francisco Bay Area Rapid Transit District (Bart);
- 25 (77) Plaintiff San Francisco Unified School District;
- 26 (78) Plaintiff San Joaquin County;
- 27 (79) Plaintiff San Jose Unified School District;
- 28 (80) Plaintiff San Juan Unified School District;

- 1 (81) Plaintiff San Luis Obispo County;
- 2 (82) Plaintiff San Marino Unified School District;
- 3 (83) Plaintiff San Mateo County;
- 4 (84) Plaintiff Santa Ana Unified School District;
- 5 (85) Plaintiff Santa Barbara County;
- 6 (86) Plaintiff Santa Clara Valley Transportation Authority;
- 7 (87) Plaintiff Santa Cruz County;
- 8 (88) Plaintiff Shasta County;
- 9 (89) Plaintiff Solano County;
- 10 (90) Plaintiff Sonoma County;
- 11 (91) Plaintiff Stanislaus County;
- 12 (92) Plaintiff Sutter County;
- 13 (93) Sweetwater Union High School District;
- 14 (94) Plaintiff the Regents of the University of California;
- 15 (95) Plaintiff Tulare County;
- 16 (96) Plaintiff Ventura County;
- 17 (97) Plaintiff Yolo County; and
- 18 (98) Plaintiff Yuba County.

19 **Defendants**

20 14. Defendant Infineon Technologies AG is a German corporation with its principal
21 place of business at Am Campeon 1-12, D-85579, Neubüberg, Germany. During the time period
22 covered by this Complaint, Defendant Infineon Technologies AG sold and distributed DRAM
23 throughout California.

24 15. Defendant Infineon Technologies North America Corp. is a Delaware corporation
25 and a wholly owned and controlled subsidiary of Infineon Technologies AG. Its principal place
26 of business is located at 640 North McCarthy Boulevard, Milpitas, California. During the time
27 period covered by this Complaint, Defendant Infineon Technologies North America Corp. sold
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1 and distributed DRAM in California. Infineon Technologies AG and Infineon Technologies
2 North America Corp. are referred to collectively herein as "Infineon."

3 16. Defendant Elpida Memory, Inc. is a business entity organized under the laws of
4 Japan, with its principal place of business at Sumitomo Seimei Yaesu Bldg. 3F, 2-1 Yaseu 2-
5 chome, Chuo-ku, Tokyo 104-0028, Japan. During the time period covered by this Complaint,
6 Defendant Elpida Memory, Inc. sold and distributed DRAM in California.

7 17. Defendant Elpida Memory (USA), Inc. is a Delaware corporation and a wholly
8 owned and controlled subsidiary of Elpida Memory, Inc., with its principal place of business at
9 1175 Sonora Court, Sunnyvale, California. During the time period covered by this Complaint,
10 Defendant Elpida Memory (USA) Inc. sold and distributed DRAM in California. Elpida
11 Memory, Inc. and Elpida Memory (USA), Inc. are referred to collectively herein as "Elpida."

12 18. Defendant Hynix Semiconductor, Inc., is a South Korean corporation with its
13 principal place of business at SAN 136-1, Ami-Ri Bubal-eub Ichon-si, Kyongki-do, South Korea.
14 During the time period covered by this Complaint, Defendant Hynix Semiconductor, Inc. sold
15 and distributed DRAM to customers in California.

16 19. Defendant Hynix Semiconductor America, Inc. is a wholly owned and controlled
17 subsidiary of Defendant Hynix Semiconductor, Inc. It is incorporated in California, with its
18 principal place of business at 3101 North First Street, San Jose, California. During the time
19 period covered by this Complaint, Defendant Hynix Semiconductor America, Inc. sold and
20 distributed DRAM to customers in California. Hynix Semiconductor, Inc. and Hynix
21 Semiconductor America, Inc. are referred to collectively herein as "Hynix."

22 20. Defendant Micron Technology, Inc. is a Delaware Corporation with its principal
23 place of business at 8000 South Federal Way, Boise, Idaho. It maintains sales and design offices
24 in California. During the time period covered by this Complaint, Defendant Micron Technology,
25 Inc. sold and distributed DRAM in California.

26 21. Defendant Micron Semiconductor Products, Inc., is a wholly owned and controlled
27 subsidiary of Defendant Micron Technology, Inc., with its principal place of business at 8000
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1 South Federal Way, Boise, Idaho. During the time period covered by this Complaint, Defendant
2 Micron Semiconductor Products, Inc. sold and distributed DRAM to customers in California,
3 including sales through its Crucial Technology division. Micron Technology, Inc., Micron
4 Semiconductor Products, Inc., and the Crucial Technology division are referred to collectively
5 herein as "Micron."

6 22. Defendant Mosel Vitelic, Inc. ("MVI") is a business entity organized under the
7 laws of Taiwan, with its principal place of business at No. 1 Creation Road, Hsinchu Industrial
8 Park, Hsinchu, Taiwan, R.O.C. During the time period covered by this Complaint, Defendant
9 MVI sold and distributed DRAM in California.

10 23. Defendant Mosel Vitelic Corporation ("MVC") is a wholly owned and controlled
11 subsidiary of MVI. It is incorporated in California, with its principal place of business at 3910
12 North First Street, San Jose, California. During the time period covered by this Complaint,
13 Defendant MVC sold and distributed DRAM in California. MVC and MVI are referred to
14 collectively herein as "Mosel Vitelic."

15 24. Defendant Nanya Technology Corporation is a business entity organized under the
16 laws of Taiwan, with its principal place of business at HWA YA Technology Park, 669, Fu Hsing
17 3rd Rd., Kueishan, Taoyuan, Taiwan, R.O.C. During the time period covered by this Complaint,
18 Defendant Nanya Technology Corporation sold and distributed DRAM in California.

19 25. Defendant Nanya Technology Corporation USA, Inc. is a wholly owned and
20 controlled subsidiary of Nanya Technology Corporation. It is incorporated in California, with its
21 principal place of business at 5104 Old Ironsides Drive, Suite 113, Santa Clara, California.
22 During the time period covered by this Complaint, Defendant Nanya Technology USA, Inc.
23 manufactured, sold, and distributed DRAM in California. Nanya Technology Corporation and
24 Nanya Technology Corporation USA, Inc. are referred to collectively herein as "Nanya."

25 26. Defendant NEC Electronics America, Inc. ("NEC") is a wholly owned and
26 controlled subsidiary of NEC Electronics Corporation. It is incorporated in California, with its
27 principal place of business at 2880 Scott Boulevard, Santa Clara, California, and its
28

1 manufacturing plant is located in Roseville, California. During the time period covered by this
2 Complaint, Defendant NEC manufactured, sold, and distributed DRAM in California.

3 27. Plaintiffs are ignorant of the true names or capacities of the defendants sued herein
4 as DOES 1 through 100. Each of the fictitiously named Defendants is responsible in some
5 manner for the occurrences herein alleged, and Plaintiffs' damages as herein alleged were
6 proximately caused by those Defendants.

7 **Co-Conspirators**

8 28. Co-conspirator Toshiba is a business entity organized under the laws of Japan,
9 with its principal place of business located at 1-1, Shibaura 1-chome, Minato-ku, Tokyo 105-
10 8001, Japan. During the time period covered by this Complaint, Toshiba sold and distributed
11 DRAM in California.

12 29. Co-conspirator Toshiba America, Inc. ("Toshiba America") is a wholly owned
13 and controlled subsidiary of Toshiba and is located at 1251 Avenue of the Americas, Suite 4110,
14 New York, New York 10020. During the time period covered by this Complaint, Toshiba
15 America sold and distributed DRAM in California. In April, 2002, Toshiba America sold its
16 DRAM assets to its competitor, Micron. Toshiba and Toshiba America are referred to
17 collectively herein as "Toshiba."
18

19 30. Co-Conspirator Mitsubishi Electric Corporation is located at Building 2-7-3,
20 Marunouchi, Chiyoda-ku, Tokyo 100-8310, Japan. During the time period covered by the
21 complaint, Mitsubishi Electric Corporation, a manufacturer of DRAM, sold and distributed
22 DRAM throughout California.

23 31. Co-conspirator Mitsubishi Electric and Electronics USA, Inc. is a wholly owned
24 and controlled subsidiary of Mitsubishi Electric Corporation and is located at 5665 Plaza Drive,
25 Cypress, California. During the time period covered by this Complaint, Mitsubishi Electric and
26 Electronics USA, Inc. sold and distributed DRAM in California. Mitsubishi Electric Corporation
27 and Mitsubishi Electric and Electronics USA, Inc. are referred to collectively herein as
28 "Mitsubishi."

1 share of worldwide DRAM sales. There are more than \$5 billion in DRAM sales annually in the
2 United States. The top four manufacturers among Micron, Samsung, Hynix, Infineon, or Elpida
3 controlled approximately 70% of U.S. DRAM sales during the time period of the conspiracy.
4 Mosel Vitelic, Elpida, NEC, and Nanya, were DRAM manufacturers with a substantial portion of
5 the remaining 30% of U.S. DRAM sales.

6 39. A substantial proportion of worldwide DRAM sales occur in California, which is
7 one of the world-wide centers of the Computer industry that depends upon DRAM

8 **DRAM Purchases**

9 40. DRAM is sold either individually, as a component of a DRAM module, or as a
10 component incorporated into an electronic system, such as Computers, Printers, or Networking
11 Equipment.

12 **Separate DRAM Purchases**

13 41. DRAM is typically purchased in the form of modules for the following purposes:
14 1) to repair a product which has a defective DRAM module; 2) to increase the functionality of an
15 existing DRAM-containing product, such as a Computer; and 3) to build a DRAM-containing
16 product from scratch.

17 42. All Defendants manufacture DRAM modules.

18 43. Such DRAM may be purchased from a Defendant like Micron, or another vendor
19 such as CDW (formerly, Computer Discount Warehouse), Staples, Office Depot, or Office Max
20 or from an Original Equipment Manufacturer ("OEM") like Dell, Hewlett-Packard Company, or
21 Gateway.

22 44. Over various spans of the period from 1998-2002, from 5 % to 36% of all DRAM
23 used in electronic data processing equipment was purchased separately for those purposes
24 according to Gartner/Dataquest estimates.

25 **DRAM Contained in Other Products**

26 45. DRAM is used in DRAM Containing Products to allow fast and efficient use of
27 electronic resources.

28 46. In a Computer, DRAM is used to store data (in the form of documents,

1 spreadsheets, or pictures, for example), while the Computer processes that data. These processes
2 could involve editing a document, performing mathematical computation to information on a
3 spreadsheet, or resizing or enhancing a picture.

4 47. Each of the functions would take dramatically more time, if accomplishable at all,
5 without DRAM.

6 48. In a Printer, DRAM is used to store the document or other item to be printed. For
7 network Printers, i.e., those that have more than one user's Computer attached to the Printer,
8 DRAM enables the Printer to store a large number of documents from a variety of sources.

9 49. Printing would be much slower without DRAM and would result in greatly
10 reduced performance of attached Computers.

11 50. In Networking Equipment, DRAM temporarily holds data such as that contained
12 in electronic mail while it is being transferred through the network. Because the amount of traffic
13 on networks has steadily increased due to the convenience of sharing data, such as when a large
14 document or picture is attached to an e-mail, DRAM is essential to the function of Networking
15 Equipment.

16 51. Computers, Printers, and Networking Equipment require specific amounts of
17 DRAM for their key functions.

18 **Computers**

19 52. All Computers have essential components, which include a microprocessor
20 (central processing unit), a hard drive, and DRAM.

21 53. Nearly all Computer advertisements note the amount of DRAM in a particular
22 model.

23 54. For example, in PC World advertisements from 1999 to 2001, Gateway, Compaq,
24 and Dell consistently listed DRAM at the top of the specifications list, generally only behind
25 processor speed. For example, in the January 2001 edition of PC World, Dell advertised its
26 Dimension L in the following manner: Intel Pentium III Processor at 800 MHz, 64MB SDRAM,
27 20GB (7200 RPM) Ultra ATA HD and other features for \$899.

28 55. Models with increased functionality usually have more DRAM. For example, in

1 the January 2001 edition of PC World, Compaq advertised multiple versions of the Presario
2 desktop PC. The base model included only 64 MB of DRAM and was advertised as a family PC.
3 Models advertised for power users and music/photo enthusiasts, who require more functionality,
4 included 128MB of DRAM.

5 56. Similarly, in the July 1999 edition of PC World, Dell advertised its Dimension
6 L400c with 32 MB of DRAM as a value desktop PC. Adjacently, Dell advertised the Dimension
7 XPS T450, its high performance model, which included 64 MB of DRAM.

8 57. Consumers can add DRAM at the time of purchase to most Computer models. For
9 example, in the July 1999 edition of PC World, Compaq provided upgrade offers allowing
10 consumers to upgrade to 128 MB of DRAM for \$120 or 256MB of DRAM for \$300. Similarly,
11 in the June 2001 edition of PC World, Dell sold 128MB of DRAM for \$60 as an upgrade for
12 desktops containing only 64MB of DRAM. The December 2001 edition contained an offer from
13 Dell for a 256MB DRAM upgrade for \$80.

14 58. In 1999, 61% of total DRAM was installed in Computers either by OEMs or by
15 end-users.

16 59. Some Plaintiffs' requirements contracts for Computers contained terms stating the
17 cost of DRAM upgrades to base-model Computers purchased under those contracts. This allows
18 individual political subdivisions and public agencies to procure Computers adequately configured
19 for their individual needs and budget considerations. A plaintiff purchasing under this type of
20 contract must make a conscious decision regarding the amount of memory supplied versus the
21 price of the upgrade, and determine whether or not to purchase this upgrade.

22 60. Approximately 5-10% of a personal Computer's cost is DRAM. In workstations,
23 the cost share of DRAM can be considerably higher.

24 **Computer System Requirements**

25 61. Producers of software applications designed to run on Computers specify the
26 minimum amounts of DRAM and the suggested amounts of DRAM to successfully run these
27 applications. These specifications are readily available to the end user. They are published in
28 multiple forms often as part of the "system requirements" included on product packaging, web

1 sites, and printed advertising materials.

2 62. Minimum and suggested system requirements for amounts of DRAM begin with
3 the operating system itself. For example, Windows 98 requires a minimum of 16 MB of DRAM,
4 and a suggested amount of 24 to 64 MB of DRAM. Windows ME requires 32 MB of DRAM,
5 with 64 MB or 128 MB providing better performance. Windows 2000 requires a minimum of 64
6 MB. Windows XP requires a minimum of 64 MB of DRAM memory, and at least 128 MB to run
7 minimally acceptable performance levels. Reasonable levels of performance are ensured by
8 configuring at least 256 MB in the Computer. The popular application software Microsoft Office
9 98 requires a minimum of 8 MB of DRAM to run with Windows NT workstation. Purchases of
10 Computers often use these suggested system requirements, which specify the amount of DRAM
11 necessary for operation, to purchase the amount of DRAM required for their needs.

12 63. Business, natural person, and government consumers all select a desired amount of
13 installed DRAM on Computers because all software installed on such devices requires a certain
14 amount of DRAM for the software to operate properly. When DRAM prices are high, Computer
15 OEMs respond by offering less memory with their base Computer models to consumers.
16 Consumers respond to higher memory prices by trading off better Computer performance against
17 higher Computer prices.

18 64. As DRAM becomes more expensive, purchasers of Computers can and do reduce
19 the amount of DRAM installed in the Computer to reduce the price of the Computer to stay
20 within their budgets. The consequence of doing so is that consumers will have a machine which
21 performs less capably than a machine with more DRAM.

22 65. Purchasers of Computers may also purchase additional DRAM to keep pace with
23 the rapidity of technological advancement in the Computer industry. Information technology
24 professionals often recommend purchasing as much DRAM in a new Computer as the budget will
25 allow, thus extending the useful lifespan of the Computer and providing increased performance.
26 For example, Kingston, a manufacturer and retailer of memory modules, recommended that a
27 Windows NT workstation used for administration and service should be equipped with between
28 64 and 256 MB of DRAM, depending on whether usage is light, medium, or heavy. It further

1 recommends that this same machine, when used for engineering and design work, should be
2 equipped with between 96 MB and 1 GB of DRAM, depending on whether the usage is light,
3 medium, or heavy. The current market price for DRAM factors into how much DRAM may be
4 purchased.

5 **Computer Servers**

6 66. DRAM is even more important in a subset of Computers known as servers.
7 Servers are Computers which connect to other Computers to share files, software applications,
8 and other functions like printing.

9 67. Like other Computers, servers contain a central processing unit, a data storage
10 media like a hard drive, and DRAM.

11 68. Because servers are meant to handle functions from multiple Computers
12 simultaneously, servers rely heavily on DRAM for this functionality.

13 69. As much as 70% of the cost of a server is attributable to DRAM.

14 70. Increases in the amount of DRAM in a server will increase its functionality.

15 71. Servers are used in situations where multiple persons connect to the same network.
16 Servers are purchased almost entirely for business or government use.

17 **Printers**

18 72. Most Computers are connected to Printers.

19 73. A Printer may be connected to a single Computer or to multiple Computers.

20 74. When a Computer user prints a document, the document is moved from the
21 Computer's DRAM to the Printer's DRAM.

22 75. If the Printer's DRAM has enough memory to hold the entire document, then the
23 Computer's DRAM is freed to perform other functions.

24 76. The amount of DRAM in the Printer thus determines how efficiently a Computer
25 and Printer function.

26 77. While certain inexpensive Printers come only with a set amount of SRAM, other
27 larger, more expensive Printers, especially Printers designed to service more than one Computer
28 at a time, can have DRAM added to them either at the factory or subsequently.

1 86. Each of these innovations on Web sites required additional DRAM on the user's
2 Computer for the pages to be viewed quickly and easily, and in some cases to work properly.

3 87. States also enhanced their Web sites during the period of the alleged conspiracy,
4 allowing, among many other activities, the renewal of licenses, the downloading of forms, laws
5 and regulations and the payment of taxes.

6 88. Each of these and the many other functions performed on state Web sites required
7 increased DRAM on the plaintiffs' Computers.

8 89. As DRAM prices rise, the ability of government entities, like plaintiffs, as users
9 and operators of Web sites to access and provide enhanced Web site services are either curtailed
10 or made more expensive.

11 **DRAM Purchasing by Manufacturers of DRAM Containing Products**

12 90. Manufacturers of Computers, Printers, and Networking Equipment purchase
13 DRAM either from the Defendants or from wholesale distributors who have purchased DRAM
14 from the Defendants. These manufacturers then sell these DRAM Containing Products to end-
15 users, as well as DRAM itself to end-users (e.g., for upgrades or repairs).

16 91. DRAM memory module-makers purchase DRAM chips from the Defendants in
17 order to manufacture modules with these chips, and then resell DRAM in said memory-modules
18 to manufacturers of Computers, Printers, and Networking Equipment for resale to end-users, to
19 wholesale distributors for resale to end-users, or directly to end-users.

20 92. The largest manufacturers of Computers, Printers, and Networking Equipment
21 purchase the bulk of their DRAM modules directly from the Defendants pursuant to periodic
22 transactions that take place under the terms of negotiated agreements or contracts. Seventy-five
23 to eighty percent of DRAM memory is estimated to be sold in this "contract" market. The typical
24 OEM business and manufacturing plan is to shorten product lead times, increase volume
25 flexibility, achieve just in-time delivery, achieve ongoing cost reductions, and seek continuous
26 improvement.

27 93. Large customers such as OEMs negotiate with the Defendants or wholesale
28 distributors for bulk purchases at favorable prices under these contracts.

1 94. Absent the alleged anti-competitive conduct of the Defendants, this contract price
2 generally would have been lower than actually observed. Information on currently negotiated
3 contract prices is collected from both DRAM buyers and sellers, and offered for sale by industry
4 consultants on a weekly or monthly basis (such organizations as Gartner/Dataquest, Semico, De
5 Dios, ICIS/LOR, iSuppli and others track and publish this information).

6 95. OEMs also sometimes purchase memory in a "spot" market (consisting of brokers,
7 distributors, and dealers, other than DRAM manufacturers and their authorized distributors).
8 These purchases are typically on a "spot" basis (i.e., for immediate delivery) when their needs
9 exceed the quantities negotiated or available under the terms of agreements to purchase directly
10 from DRAM makers. These purchases do not represent longer term commitments by the brokers,
11 distributors, and dealers in the spot market to deliver product in the future. When OEMs
12 purchase or acquire greater quantities of DRAM than anticipated or needed for equipment
13 production requirements, they will sell their excess inventories into the spot market. If spot prices
14 are substantially below contract prices, OEMs can shift their purchases into the spot market and
15 take advantage of the lower spot market price.

16 96. Thus, contract DRAM prices are integrally linked to the prices available on the
17 spot market for DRAM. Moreover, the spot market price is openly advertised, easy to track, and
18 influences contract price negotiations.

19 97. High spot market prices for DRAM thus enable the Defendants to obtain higher
20 contract prices for DRAM than they would otherwise receive. A DRAM manufacturer knows
21 that a DRAM purchaser has little choice but to agree to pay a higher price. Contract prices are
22 substantially higher than spot prices for DRAM, which can cause spot prices to rise as well, as
23 OEMs compete with others for what is available in the spot market.

24 98. Between the years 1998 to 2003, the largest OEMs (Dell, HP, IBM, Compaq, and
25 Gateway) accounted for approximately 60% of the U.S. Computer market.

26 99. Between the years 1999 to 2001, five companies (Dell, HP, IBM, Compaq, and
27 Sun) accounted for more than 75% of the U.S. server market.
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VI. DEFENDANTS' ILLEGAL CONDUCT

100. In June 2002, the United States Department of Justice launched a criminal investigation. Although initially denying any culpability, one of the conspirators, Micron, agreed to cooperate with federal investigators, revealing the details of the conspiracy in exchange for amnesty from federal criminal charges. To date, four manufacturers – Samsung, Hynix, Infineon, and Elpida – and twelve individuals have been charged with, and have pleaded guilty to, criminal price fixing as a result of the investigation, and they have paid fines in excess of \$730 million. These individuals have also served jail time for their illegal conduct.

101. Beginning no later than 1998 and continuing through the conspiracy period, the Defendant DRAM manufacturers and their co-conspirators discussed and coordinated the prices that they charged to OEMs, and to their other customers. These manufacturers did not limit this pricing coordination to isolated or occasional conversations. To the contrary, during a roughly four-year period, there were frequent pricing communications among the conspiring manufacturers, exchanges that intensified in the days immediately preceding the dates on which they submitted bids to supply DRAM to the OEMs, their largest and most important customers.

102. As early as spring of 1998 a Vice President of Hyundai Electronics America, the predecessor of Hynix, writing to the industry in general, proposed, as a solution to the problem of excess supply, that DRAM makers shut down production for a limited time to stabilize prices. The article stated that “if the plan is to work . . . all DRAM makers must play fairly for the overall good of our industry. A rogue player . . . can keep the DRAM business on thin ice.” In or around 1998, price-related discussions also began among certain DRAM Manufacturers regarding certain OEMs involving the exchange of pricing information.

103. Beginning in the mid-1990s through 2002, dramatic consolidation occurred among DRAM manufacturers, leading to 40% reduction in the number of DRAM manufacturers worldwide.

104. In 2001, Defendants acted in a coordinated fashion to reduce supply in order to artificially raise prices. At a meeting among DRAM manufacturers in the fall of 2001, a Mosel

1 Vitelic executive stated that a “basis for understanding had been reached” in which the
2 manufacturers were to “trim some production starting in September.”

3 105. A public report stated: “Component costs rose as DRAM contract prices moved
4 four times off their December [2001] lows of less than \$1. Due to the sudden rise in pricing and
5 the declining demand, many hardware vendors suspended their promotions for DRAM upgrades
6 and began to adjust PC pricing to reflect the higher component costs. At one point, money-per-
7 box figures stabilized as contract prices moved toward the \$4 to \$5 range.”

8 106. OEMs have access to third party supply Hubs which store a supply of DRAM near
9 certain factories. Defendants reduced the amount of supply kept at hubs in order indicate
10 decreasing supply and thus support anticompetitive pricing. They deliberately slowed inventory
11 replenishment to foster the impression that market conditions were driving up or stabilizing
12 prices.

13 107. Defendants’ manipulation of the prices charged to OEMs (contract price) and in
14 the spot market price, and of DRAM production and inventories resulted in elevated prices for all
15 DRAM units sold.

16 108. Defendants and their co-conspirators have engaged in a contract, combination,
17 trust, or conspiracy, the effect of which was to stabilize prices at which they sold DRAM and to
18 artificially inflate the price levels at which they sold DRAM.

19 109. Defendants’ contract, combination, trust, or conspiracy was centered in, carried
20 out, and effectuated through frequent communications substantially originating from, occurring
21 in, or directed to the state of California among the Defendants themselves and between the
22 Defendants and OEMs located in California and elsewhere.

23
24 **Micron**

25 110. Between 1999 and June 2002, at least 19 Micron employees exchanged price-
26 related data in communication with employees of competitors Samsung, Hynix, Mosel Vitelic,
27 Nanya, Elpida, NEC, Infineon, and Toshiba.

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1 Sherman Antitrust Act, 15 U.S.C. section 1.

2 119. Hynix admitted during the sentencing hearing that, in furtherance of the
3 conspiracy, its officers and employees engaged in discussions and attended meetings with
4 representatives of other DRAM manufacturers. During these discussions and meetings,
5 agreements were reached to fix the price of DRAM to be sold to OEMs. Hynix was sentenced to
6 pay a fine of \$185 million.

7 120. Hynix's DRAM sales directly affected by the conspiracy in the United States
8 totaled at least \$839 million. The conspiracy unlawfully fixed the prices that Dell, HP, Compaq,
9 IBM, Apple, Gateway, and others paid for DRAM.

10 121. During the period of the conspiracy at least 19 Hynix officers and employees,
11 including senior executives with final pricing authority, had price-related contacts with
12 employees of Defendant competitors Samsung, Micron, Infineon, Toshiba, Elpida, Mosel Vitelic,
13 and NEC.

14 122. C.K. Chung, Director of Worldwide Strategic Account Sales for Hynix, had
15 pricing discussions with his counterparts at Samsung both in person and on the phone.

16 123. Gary Swanson, Hynix's Vice President in charge of U.S. memory sales and a
17 member of the Hynix semiconductor America Board of Directors, had price-related contacts with
18 Mike Sadler, Vice President of Worldwide Sales for Micron.

19 124. The contacts between the 19 Hynix officers and employees and their competitors
20 included participating in meetings, conversations, and communications to discuss that price of
21 DRAM to be sold to customers; agreeing with the competitors to charge prices of DRAM at
22 certain levels to be sold to certain customers; issuing price quotes in accordance with the
23 agreements reached; and exchanging information on sales in order to monitor and enforce their
24 agreements.

25 125. Hynix officers and employees communicated price-related discussions with
26 competitors to their superiors at Hynix by e-mail, telephone and in person. During Hynix sales
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1 and marketing conference calls, participants discussed the fact that competitive pricing
2 information had been obtained from competitor contacts.

3 126. Four Hynix executives, including C.K. Chung, have pleaded guilty and serve jail
4 time for participating in the global conspiracy to fix DRAM prices.

5 Infineon

6 127. Infineon Technologies AG pleaded guilty in October 2004 in the Northern District
7 of California to a Criminal Information charging it with participating in a conspiracy to fix the
8 prices of DRAM sold to OEM customers during certain periods of time between July 1, 1999, and
9 June 15, 2002, in violation of the Sherman Antitrust Act, 15 U.S.C. Section 1.

10 128. Infineon admitted during the sentencing hearing that its officers and employees
11 engaged in discussions and attended meetings with representatives of other DRAM
12 manufacturers. During these discussions and meetings, agreements were reached to fix the price
13 of DRAM to be sold to OEMs. Infineon and its co-conspirators reached agreements to both limit
14 the rate of price declines during periods when DRAM prices decreased, and reached agreements
15 on price increases on sales to certain OEMs. Infineon was sentenced to pay a fine of \$160
16 million.

17 129. Between July 1, 1999, and June 15, 2002, Infineon sold DRAM to IBM, Compaq,
18 HP, Dell, and Gateway. Infineon executives negotiated the prices of DRAM sold to each OEM
19 every two weeks.

20 130. During the time period of the conspiracy at least 12 Infineon officers and
21 employees, including senior executives with final pricing authority, had price-related discussions
22 with counterparts at their competitors including Samsung, Micron, Hynix, Elpida, Nanya, Mosel
23 Vitelic, and Toshiba.

24 131. T. Rudd Corwin, Infineon's Vice President for Customer Marketing and Sales for
25 Memory Products in North America, authorized his employees to obtain pricing information from
26 competitors in exchange for Infineon pricing information for DRAM.
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1 the price fixing conspiracy by participating in meetings, conversations, and communications in
2 the United States and elsewhere with competitors to discuss the prices of DRAM to be sold to
3 certain customers and agreed to during those meetings, conversations, and communications to fix
4 prices of DRAM at certain levels for certain customers. Elpida and its co-conspirators issued
5 price quotations in accordance with the agreements reached, and exchanged information on sales
6 of DRAM to certain customer, for the purpose of monitoring and enforcing adherence to the
7 agreed upon prices.

8 139. During the period the conspiracy at least 19 Elpida officers and employees had
9 price-related contacts with officers and employees of competitors including Infineon, Toshiba,
10 Hynix, Micron, Samsung, Mitsubishi, and Nanya.

11 140. Elpida officers and employees communicated price-related discussions with
12 competitors to their superiors at Elpida by e-mail, telephone, and in person.

13 141. One Elpida executive, Dimitrios James ("Jim") Sogas, pleaded guilty and had
14 served jail time for participating in the worldwide DRAM price fixing conspiracy.

15 **Mosel Vitelic, Nanya, NEC**

16 142. Officers, agents, and employees of Mosel Vitelic, Nanya, and NEC had numerous
17 price-related discussions with their counterparts at competitors.

18 143. On information and belief, officers, agents, and employees of Mosel Vitelic,
19 Nanya, and NEC communicated price-related discussions with competitors through their
20 superiors.

21 **VII. CO-CONSPIRATORS' ACTIONS**

22 **Samsung**

23 144. Samsung pleaded guilty on November 30, 2005, in the Northern District of
24 California to a Criminal Information charging the companies with participating in a conspiracy to
25 suppress and eliminate competition by fixing the prices of DRAM to be sold to OEMs during
26 certain periods of time between April 1, 1999, to about June 15, 2002, in violation of the Sherman
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1 Antitrust Act, 15 U.S.C. Section 1.

2 145. Samsung admitted during sentencing that in furtherance of the conspiracy, its
3 officers and employees engaged in discussions and attended meetings with representatives of
4 other DRAM manufacturers. During these discussions and meetings agreements were reached to
5 fix the price of DRAM to be sold to OEMs. Samsung was sentenced to pay a fine of \$300
6 million.

7 146. Samsung's DRAM sales were directly affected by the conspiracy in the United
8 States totaled at least \$1.2 billion. The conspiracy unlawfully fixed the prices that Dell, HP,
9 Compaq, IBM, Apple, and Gateway paid for DRAM.

10 147. During the period of the conspiracy at least 48 officers and employees, including
11 senior executives with final pricing authority had price-related contacts with employees of
12 Defendant competitors Micron, Elpida, Hynix, Infineon, Toshiba, NEC, Infineon, Hitachi,
13 Mitsubishi, Nanya, and Mosel Vitelic.

14 148. H.J. Kim, President of Samsung Semiconductor, Inc., had discussions with both
15 Mike Sadler, the Micron executive with final pricing authority, and with Steve Appleton, the
16 CEO of Micron.

17 149. Dieter Mackowiak, Senior Vice President of Sales and Marketing at Samsung
18 Semiconductor had discussions on market conditions and pricing trends with Mike Sadler of
19 Micron, Peter Schaefer of Infineon, and Farhad Tabrizi of Hynix.

20 150. The contacts between Samsung officers and employees and their competitors
21 included participating in meetings, conversations, and communications to discuss the price of
22 DRAM to be sold to customers and agreeing with their competitors to charge elevated prices of
23 DRAM to their customers. These agreements also included issuing price quotes that had been
24 agreed upon and exchanging information on sales in order to monitor and enforce their
25 agreements.
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27 151. Samsung officers and employees communicated price-related discussions with
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1 competitors to their superiors at Samsung by e-mail, phone, or in person.

2 152. Three senior Samsung executives pleaded guilty and serve periods of
3 imprisonment for participating in the DRAM price fixing conspiracy.

4 **Toshiba**

5 153. Between 1998 and 2002, Toshiba employees had numerous discussions about
6 price with their competitors. Indeed, one employee referred to a “regimen of cooperation”
7 among Samsung, Toshiba, and Elpida. Toshiba checked in with competitors such as Samsung
8 and Elpida before raising prices to OEMs.

9 154. Toshiba officers and employees communicated price-related discussions with
10 competitors to their superiors at Samsung by e-mail, phone, or in person.

11 **Hitachi**

12 155. Elpida Memory, Inc., in its plea agreement with the United States Department of
13 Justice stated that it, or its corporate founders, Hitachi and NEC “participated in a conspiracy in
14 the United States and elsewhere among certain DRAM producers, the primary purpose of which
15 was to fix the price of DRAM sold to certain OEMs.” The plea states that Hitachi’s sales directly
16 affected by the conspiracy are \$113 million.

17 156. Between 1998 and 2002, Hitachi employees regularly communicated about price
18 with their competitors. Hitachi employees had price-related discussions with their counterparts at
19 Micron, Samsung, and Infineon.

20 157. Hitachi officers and employees communicated price-related discussions with
21 competitors to their superiors at Samsung by e-mail, phone, or in person.

22 **Mitsubishi**

23 158. Between 1998 and 2002, Mitsubishi employees regularly communicated about
24 price with their competitors. They freely provided competitors with information about current
25 pricing.

26 159. Mitsubishi officers and employees communicated price-related discussions with
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1 competitors to their superiors by e-mail, phone, or in person.

2 160. In October 2002, Mitsubishi agreed to transfer its DRAM assets and operations to
3 its competitor Elpida, leaving Elpida (originally a joint venture of NEC and Hitachi) as the only
4 major DRAM manufacturer in Japan and promoting Elpida to one of the world's four largest
5 DRAM manufacturers. The transfer was completed in 2003.

6 VIII. FRAUDULENT CONCEALMENT

7 161. From approximately 1998 to June of 2002, Defendants effectively, affirmatively,
8 and fraudulently concealed their unlawful combination and conspiracy from the State.

9 162. Defendants engaged in a successful conspiracy that by its nature was inherently
10 self-concealing.

11 163. Defendants' wrongful conduct was carried out in part through means and methods
12 that were designed and intended to avoid detection, including but not limited to, telephone calls
13 among the conspirators, in person and secret meetings among the conspirators, anonymous emails
14 and internet communications, instructions to destroy communications after reading, and
15 falsification of company records, all of which, in fact, successfully precluded detection.
16

17 164. Plaintiffs could not have discovered their unlawful scheme and conspiracy earlier
18 because of their effective, affirmative, and fraudulent concealment of their activities, including
19 falsely attributing price increases to increased demand, shortages in supply, increased
20 manufacturing costs, increased prices of labor and raw materials, and/or insufficient production
21 capacity

22 165. Defendants communicated to their United States entities false reasons to explain
23 price increases, such as seasonal ebb and flow and restriction in output, and instructed them to use
24 these false reasons with U.S. customers. Plaintiffs are informed and believe that Defendants and
25 their Co-conspirators communicated said reasons to OEMs who inquired as to the reason for price
26 increases.

27 167. Plaintiffs had no knowledge of the combination and conspiracy described herein,
28

1 or any facts that might have led to the discovery of the conspiracy in the exercise of reasonable
2 diligence, before June 2002, when Defendants Hynix, Infineon, Micron, and Samsung first
3 publicly disclosed the United States Department of Justice investigation.

4 168. Defendants' effective, affirmative, and fraudulent concealment was a substantial
5 factor in causing Plaintiffs' harm.

6 169. As a result of the fraudulent concealment of the conspiracy, Plaintiffs assert the
7 tolling of the applicable statute of limitations affecting Plaintiffs' claims.

8 **IX. TOLLING AND SUSPENSION OF THE STATUTES OF LIMITATION**

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10 170. On August 1, 2005, the Attorney General of the State of California, on behalf of
11 the State of California and its political subdivisions and public agencies, including Plaintiffs,
12 entered into a tolling agreement with Defendants. The parties agreed that beginning on August 1,
13 2005, all applicable limitations period shall be tolled as to each and every potential state and
14 federal civil claims that Plaintiffs may have against Defendants. The parties have revised the
15 tolling agreement on several occasions to extend the termination date of the tolling period. From
16 August 1, 2005 through the date Plaintiffs initially filed their claims in federal court, the agreed
17 upon tolling period has been uninterrupted.

18 171. On July 14, 2006, Plaintiffs filed a complaint in federal court. Thereafter, Plaintiffs
19 filed a motion for class certification. On September 5, 2008, the federal court denied class
20 certification. Plaintiffs assert that all applicable statutes of limitation also were tolled until the
21 court declined to certify the class.

22 172. Plaintiffs further assert that all applicable statutes of limitation were suspended due
23 to the criminal proceedings instituted by the United States Department of Justice against Elpida,
24 Hynix, Infineon, Samsung, and certain individuals. The proceedings began on or about
25 December 17, 2003 and ended on or about March 19, 2008.

1 X. INJURY

2 173. But for Defendants' anticompetitive acts, Plaintiffs would have been able to
3 purchase DRAM and DRAM Containing Products of Computers, Printers, and Networking
4 Equipment at lower prices, and would have been able to purchase more capable and higher
5 performance DRAM Containing Products than were actually offered for sale to them.

6 174. As a direct and proximate result of the unlawful conduct alleged above, Plaintiffs
7 were unable to purchase DRAM or DRAM Containing Products at prices that were determined by
8 free and open competition. Consequently, they have been injured in its business and property in
9 that, *inter alia*, they have paid more and continue to pay more for such products than they would
10 have paid in a free and open, competitive market, and were not offered more capable and higher
11 performance products that would have been offered in a free and open competitive market.

12 175. Prices for DRAM are cyclical. As a new DRAM chip is introduced (i.e., one with
13 larger capacity), the chip is generally priced higher than the chip it replaces. Over the lifecycle of
14 the chip its price declines until it is not more expensive than the chip it replaces. OEMs rely on
15 declining chip prices to offer more powerful equipment at lower prices.

16 176. One OEM, Dell Computer Corp., steadily gained market share due to close
17 inventory controls. In 1998, Dell's United States market share was 13.4%. By 2002, it had risen
18 to 27.7%. Dell's inventory control system used just-in-time management of Computer
19 components to take advantage of the steady downward trend in component prices. This allowed
20 Dell to gain significant market share by passing this reduction in component prices on to the
21 consumer. This is referred to by some in the industry as "relentless price cutting," which has
22 forced other OEMs to pass on their savings as well or lose market share to Dell.

23 177. Dell's inventory control system is adversely affected by unexpected increases in
24 component costs. Unexpected increases in costs deprive Computer purchasers of pass through
25 savings. When component cost increases prevented Dell from cutting prices, other OEMs
26 likewise did not cut their prices. Purchasers of devices made by OEMs were therefore deprived
27 of price declines in components such as DRAM that they would have otherwise enjoyed due to
28

1 such component cost increases.

2 178. Computer component prices overall were steadily falling or holding steady for
3 much of the time period from 1998 until 2002, sometimes declining as much as one to two
4 percent per week. The only major components that experienced significant prices increases were
5 LCD monitors and DRAM. LCD monitors were not a standard component at the time and were
6 considered an upgrade.

7 179. During the relevant time period, OEMs published the price of memory upgrades
8 for available Computer models. Price increases in DRAM caused the price of memory upgrades
9 to increase.

10 180. DRAM price increases caused OEMs to offer less DRAM as a standard feature of
11 their products for a given price than they would have otherwise and to charge extra for the
12 amount of memory that previously had been standard. Since purchasers of DRAM Containing
13 Products paid the same price for a device with less memory than they previously would have
14 purchased, or a higher price for a product with the same memory they previously would have
15 purchased, they paid more than they would have absent the conspiracy.

16 181. Moreover, purchasers needed DRAM upgrades to meet suggested system
17 requirements, depending upon the intended level of usage of the device. Such purchasers paid the
18 full price increase in DRAM, passed through the price of an upgrade.

19 182. The Defendants' actions resulted in purchasers of DRAM and DRAM Containing
20 Products paying higher prices for DRAM-containing devices or in buying products with less
21 performance than they would have preferred.

22 183. Numerous plaintiffs faced increased costs as a direct result of Defendants'
23 conspiracy to increase the price of DRAM.

24 184. As a direct and proximate result of the unlawful conduct alleged above, the
25 Defendants have unjustly benefitted from the artificially inflated prices for DRAM itself,
26 regardless of whether its end-use was as a component of a Computer, Printer, server, or network
27
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1 equipment or as an upgrade to such DRAM-containing devices. Defendants' increased revenues
2 and profits on their sale of DRAM products resulting from their unlawful and inequitable conduct
3 have thus far been retained by the Defendants.

4 185. As a direct and proximate result of the unlawful conduct alleged above,
5 Defendants and their Co-conspirators benefitted unjustly from the supra-competitive and
6 artificially inflated prices and profits on their sale of DRAM and DRAM Containing Products
7 resulting from their unlawful and inequitable conduct, and have thus far retained the illegally
8 obtained profits.

9 186. Between 1998 and 2002, OEMs published the price of memory upgrades for
10 available Computer models. Price increases in DRAM caused the price of memory upgrades to
11 increase.

12 187. DRAM price increases caused OEMs to offer less DRAM as a standard feature of
13 their products for a given price that they would have otherwise. Thus, Plaintiffs paid the same
14 price for a device with less memory than they otherwise would, and effectively paid a supra-
15 competitive price.

17 XI. ASSIGNMENT CLAUSES

18 188. By operation of Sections 4552-4554 of the California Government Code,
19 contractors who sell products or services to political subdivisions or public agencies assign to the
20 purchasing political subdivision or public agency all claims those contractors have against others
21 for violation of state antitrust laws.

22 189. Contractors to the Plaintiffs, such as OEMs, distributors, and other vendors,
23 purchased DRAM directly from the Defendants for resale to others. These OEMs, distributors,
24 and other vendors ("DRAM Resellers") sold the DRAM individually, and also incorporated the
25 DRAM into DRAM Containing Products sold by DRAM Resellers.

26 190. DRAM Resellers paid higher-than-competitive prices for DRAM and DRAM
27 Containing Products as result of the Defendants' unlawful conduct.

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1 Clayton Act (15 U.S.C. Sec. 15) or under the Cartwright Act (Chapter 2
2 (commencing with Section 16700) of Part 2 of Division 7 of the Business and
3 Professions Code), arising from purchases of goods, materials, or services by
4 the bidder for sale to the purchasing body pursuant to the bid.

5 196. The effect of this assignment clause was to transfer the bidding DRAM Reseller's
6 causes of action against the Defendants under the California Cartwright Act (direct and indirect
7 purchaser claims).

8 XII. FIRST CAUSE OF ACTION

9 (Count One – For Violation of the Cartwright Act, Business & Professions Code Section
10 16720)

11 (Against All Defendants)

12 197. Plaintiffs incorporate by reference and allege as if fully set forth herein paragraphs
13 1 to 187 above with the same meaning, force and effect.

14 198. Beginning at a time presently unknown to Plaintiffs, but at least on or around
15 1998, and continuing thereafter at least up to and including June 15, 2002, Defendants and their
16 Co-conspirators entered into and engaged in a continuing unlawful trust for the purpose of
17 unreasonably restraining trade in violation of Section 16720, California Business and Professional
18 Code.

19 199. The aforesaid violations of Section 16720, California Business and Professions
20 Code, consisted, without limitation, of a continuing unlawful trust and concert of action among
21 the Defendants and their Co-conspirators, the substantial terms of which were to fix, raise,
22 maintain and stabilize the prices of, and to allocate markets for, DRAM.

23 200. For the purpose of forming and effectuating the unlawful trust, the Defendants and
24 their Co-conspirators conspired to:

- 25
- 26 a. fix, raise, maintain and stabilize the price of DRAM;
 - 27 b. allocate markets for DRAM amongst themselves;
- 28

1 c. submit rigged bids for the award and performance of certain DRAM
2 contracts; and

3 d. to allocate amongst themselves the production of DRAM.

4 201. The combination and conspiracy alleged herein has had, *inter alia*, the following
5 effects:

6 a. price competition in the sale of DRAM has been restrained, suppressed
7 and/or eliminated in the State of California;

8 b. prices for DRAM sold by Defendants and their Co-conspirators have been
9 fixed, raised, maintained and stabilized at artificially high, non-competitive levels in the State of
10 California; and

11 c. those who purchased Defendants' and their Co-conspirators' DRAM have
12 been deprived of the benefit of free and open competition.

13 202. As a direct and proximate result of Defendants' unlawful conduct, Plaintiffs were
14 injured in their business and property in that they paid more for DRAM and DRAM Containing
15 Products than they would have paid in the absence of Defendants' unlawful conduct. As a result
16 of Defendants' violation of Section 16720 of the California Business and Professions Code,
17 Plaintiffs bring this claim pursuant to Section 16750(c) and seek treble damages and the costs of
18 suit, including reasonable attorneys' fees, pursuant to Section 16750(a) of the California Business
19 and Professions Code.

20 **(Count Two – For Violation of the Cartwright Act, Business & Professions Code Section**
21 **16720, by Assignment Pursuant to Government Code Sections 4552-4554)**

22 **(Against All Defendants)**

23 203. Plaintiffs incorporate by reference and allege as if fully set forth herein paragraphs 1
24 to 202 above with the same meaning, force and effect.

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XIII. SECOND CAUSE OF ACTION
(For Violation of the Unfair Competition Law
Business & Professions Code Section 17200)
(Against All Defendants)

204. Plaintiffs incorporate by reference and allege as if fully set forth herein paragraphs 1 to 187 and 197 to 203 above with the same meaning force and effect.

205. Beginning at a time presently unknown to Plaintiffs, but at least on or around 1998, and continuing thereafter at least up to and including June 15, 2002, Defendants committed acts of unfair competition, as defined by Sections 17200, et seq. of the California Business and Professions Code.

206. The acts, omissions, misrepresentations, practices and non-disclosures of Defendants, as alleged herein, constituted a common continuous and continuing course of conduct of unfair competition by means of unfair, unlawful and/or fraudulent business acts or practices within the meaning of California Business and Professions Code, Section 17200, et seq., including, but not limited to, the following:

a. The violations of Section 16720, et seq., of the California Business and Professions Code, set forth above, thus constituting unlawful acts within the meaning of Section 17200 of the California Business and Professions Code;

b. Defendants' acts, omissions, misrepresentations, practices and nondisclosures, as described above, whether or not in violation of Section 16720, et seq. of the California Business and Professions Code, and whether or not concerted or independent acts, are otherwise unfair, unconscionable, unlawful or fraudulent;

c. Defendants' act and practices are unfair to consumers of DRAM in the State of California, within the meaning of Section 17200, California Business and Professions Code; and

d. Defendants' acts and practices are fraudulent or deceptive within the meaning of Section 17200 of the California Business and Professions Code.

1 enriched as a result of their wrongful conduct and by Defendants' unfair competition. Plaintiffs
2 are accordingly entitled to equitable relief including restitution and/or disgorgement of all
3 revenues, earnings, profits, compensation and benefits which may have been obtained by
4 Defendants as a result of such business practices.

5 **XV. PRAYER FOR RELIEF**

6 WHEREFORE, Plaintiffs pray for judgment against Defendants as follows:

- 7 1. That judgment be entered in favor of Plaintiffs and against Defendants;
- 8 2. That the Court adjudge and decree that Defendants' contract, conspiracy, or
9 combination constitutes an illegal restraint of trade in violation of the Cartwright Act, section
10 16720, et. seq., of the Business & Professions Code;
- 11 3. That the Court adjudge and decree that Defendants' contract, conspiracy, or
12 combination violates the Unfair Competition Law, section 17200, et seq. of the Business &
13 Professions Code;
- 14 4. That Plaintiffs be awarded their damages, trebled, in an amount according to
15 proof;
- 16 5. That Plaintiffs be awarded restitution, including disgorgement of profits obtained
17 by Defendants as a result of their acts of unjust enrichment, or any acts in violation of state
18 antitrust or consumer protection statutes and laws, including section 17000 of the Business &
19 Professions Code;
- 20 6. That Plaintiffs and natural persons be awarded pre- and post-judgment interest,
21 and that the interest be awarded at the highest legal rate from and after the date of service of the
22 initial complaint in this action;
- 23 7. That Plaintiffs recover their costs and reasonable attorney's fees; and
- 24 8. That the Court grant other legal and equitable relief as it may deem just and
25 proper, including such other relief as the Court may deem just and proper to redress, and prevent
26 recurrence of, the alleged violation to dissipate the anticompetitive effects of Defendants'
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1 violations, and to restore competition.


2 **XVI. JURY TRIAL DEMAND**

3 Plaintiffs hereby demand trial by jury for all causes of action, claims or issues in this
4 action which are triable as a matter of right to a jury.

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6 DATE: February 4, 2009

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