

1 WILLIAM H. MANNING (*pro hac vice* pending)
E-mail: WHManning@rkmc.com
2 RICHARD M. MARTINEZ (*pro hac vice* pending)
E-mail: RMMartinez@rkmc.com
3 AARON R. FAHRENKROG (*pro hac vice* pending)
E-mail: ARFahrenkrog@rkmc.com
4 LOGAN J. DREW (*pro hac vice* pending)
E-mail: LJDrew@rkmc.com
5 **ROBINS, KAPLAN, MILLER & CIRESI L.L.P.**
2800 LaSalle Plaza
6 800 LaSalle Avenue
Minneapolis, MN 55402-2015
7 Telephone: 612-349-8500
Facsimile: 612-339-4181

8 J. SCOTT CULPEPPER (*pro hac vice* pending)
E-mail: JSCulpepper@rkmc.com
9 **ROBINS, KAPLAN, MILLER & CIRESI L.L.P.**
One Atlantic Center
10 1201 West Peachtree St., Suite 2200
Atlanta, GA 30309-3453
11 Telephone: 404-760-4300
12 Facsimile: 404-233-1267

13 DAVID MARTINEZ, Bar No. 193183
DMartinez@rkmc.com
14 **ROBINS, KAPLAN, MILLER & CIRESI L.L.P.**
2049 Century Park East, Suite 3400
15 Los Angeles, CA 90067-3208
Telephone: 310-552-0130
16 Facsimile: 310-229-5800

17 Attorneys for Plaintiffs
ADVANCED MICRO DEVICES, INC.
18 and ATI TECHNOLOGIES ULC

19 **UNITED STATES DISTRICT COURT**
20 **NORTHERN DISTRICT OF CALIFORNIA**
21 **SAN JOSE DIVISION**

22
23 (1) ADVANCED MICRO DEVICES, INC.,
24 a Delaware Corporation,
25 (2) ATI TECHNOLOGIES ULC,
a Canadian unlimited liability
26 company,

27 Plaintiffs,

28 v.

Case No. 5:14-cv-1012

**COMPLAINT FOR PATENT
INFRINGEMENT**

DEMAND FOR JURY TRIAL

1) LG ELECTRONICS, INC., a Korean entity,
 (2) LG ELECTRONICS U.S.A., Inc., a Delaware entity,
 (3) LG ELECTRONICS MOBILECOMM U.S.A., INC., a California entity,

Defendants.

Plaintiffs Advanced Micro Devices, Inc. and ATI Technologies ULC (collectively “Plaintiff” or “AMD”) for their complaint allege as follows:

INTRODUCTION

This is an action against LG Electronics, Inc. and its U.S. subsidiaries and related entities LG Electronics U.S.A., Inc., and LG Electronics MobileComm U.S.A., Inc., (individually or collectively “Defendants” or “LG Electronics”), for patent infringement under the Patent Laws of the United States, 35 U.S.C. § 1 et seq., for infringing the following AMD patents:

- (a) U.S. Patent No. 6,889,332 (“Helms ’332 patent”), entitled “*Variable Maximum Die Temperature Based on Performance State*,” owned by Advanced Micro Devices, Inc.;
- (b) U.S. Patent No. 6,895,520 (“Altmejd ’520 patent”), entitled “*Performance and Power Optimization via Block Oriented Performance Measurement and Control*,” owned by Advanced Micro Devices, Inc.;
- (c) U.S. Patent No. 6,897,871 (“Morein ’871 patent”), entitled “*Graphics Processing Architecture Employing a Unified Shader*,” owned by Advanced Micro Devices, Inc.’s subsidiary, ATI Technologies ULC;
- (d) U.S. Patent No. 7,327,369 (“Morein ’369 patent”), entitled “*Graphics Processing Architecture Employing a Unified Shader*,” owned by Advanced Micro Devices, Inc.’s subsidiary, ATI Technologies ULC;

- (e) U.S. Patent No. 7,742,053 (“Lefebvre ’053 patent”), entitled “*Multi-Thread Graphics Processing System*,” owned by Advanced Micro Devices, Inc.’s subsidiary, ATI Technologies ULC;
- (f) U.S. Patent No. 5,898,849 (“Tran ’849 patent”), entitled “*Microprocessor Employing Local Caches for Functional Units to Store Memory Operands Used by the Functional Units*,” owned by Advanced Micro Devices, Inc.;
- (g) U.S. Patent No. 6,266,715 (“Loyer ’715 patent”), entitled “*Universal Serial Bus Controller with a Direct Memory Access Mode*,” owned by Advanced Micro Devices, Inc.;
- (h) U.S. Patent No. 6,784,879 (“Orr ’879 patent”), entitled “*Method and Apparatus for Providing Control of Background Video*,” owned by Advanced Micro Devices, Inc.’s subsidiary, ATI Technologies ULC; and
- (i) U.S. Patent No. 7,095,945 (“Kovacevic ’945 patent”), entitled “*System for Digital Time Shifting and Method Thereof*,” owned by Advanced Micro Devices, Inc.’s subsidiary, ATI Technologies ULC.

Collectively, the AMD patents generally cover technologies that provide critical functionalities in consumer electronic devices, meet and exceed myriad performance requirements while enabling attractive form factors demanded by users in mobile devices, and deliver an improved user experience in a wide variety of consumer products. Among other things, the AMD patents disclose technologies relating to semiconductors with innovative logic or design, improved graphics and video processing, ways to more effectively communicate across communications networks, improved user interface functionalities and capabilities, and consumer products incorporating or embodying the disclosed inventions.

THE PARTIES

1. Advanced Micro Devices, Inc. is a Delaware corporation with its principal executive offices at One AMD Place, Sunnyvale, California 94085. Advanced Micro Devices, Inc. is an innovative and pioneering technology company that designs

1 computer processors and related technologies for commercial and consumer markets.
2 Advanced Micro Devices, Inc. designs and integrates cutting-edge technology that
3 enables immersive graphics, high-definition video, and innovative features that power
4 millions of electronic devices.

5 2. ATI Technologies ULC is a subsidiary of Advanced Micro Devices, Inc.
6 and is incorporated in Alberta, Canada with its principal offices at 1 Commerce Valley
7 Drive E, Markham, Ontario, L3T 7X6, Canada. ATI Technologies ULC supports
8 Advanced Micro Devices Inc.'s design and development of cutting-edge technology that
9 enables immersive graphics, high-definition video, and innovative features that power
10 millions of electronic devices.

11 3. LG Electronics, Inc. ("LGI") is a Korean business entity with its principal
12 offices at LG Twin Towers 20, Yeouido-dong, Yeongdeungpo-gu, Seoul, South Korea
13 150-721. On information and belief, LGI is a \$50 billion global leader in consumer
14 electronics, home appliances, and mobile communications, and is one of Asia's largest
15 electronics companies. On information and belief, LGI designs, manufactures, has
16 manufactured, uses, offers for sale, sells and/or imports into the United States a wide
17 variety of consumer electronics products, including numerous televisions, smartphones,
18 tablets, Blu-ray players, projectors, and smart appliances.

19 4. LG Electronics U.S.A., Inc. ("LGE") is a Delaware corporation with its
20 principal place of business located at 1000 Sylvan Avenue, Englewood Cliffs, New Jersey
21 07632. On information and belief, LGE is a wholly-owned subsidiary of LGI. On
22 information and belief, LGE is the U.S. sales arm for LGI and manufactures, has
23 manufactured, uses, offers for sale, sells and/or imports into the United States a wide
24 range of consumer electronics products, including numerous televisions, smartphones,
25 tablets, Blu-ray players, projectors, and smart appliances, conducts primary market and
26 product research for LGI, and enables regional customers to influence the direction of
27 LGI's future technologies and products.
28

5. LG Electronics MobileComm U.S.A., Inc. ("LGM") is a California corporation with its principal place of business at 10225 Willow Creek Road, San Diego, California 92131, and at least one other place of business in the State of California at 2570 North 1st Street, #360, San Jose, California 95131. On information and belief, LGM is a wholly-owned subsidiary of LGE. On information and belief, LGM manufactures, has manufactured, uses, offers for sale, sells and/or imports into the United States various consumer electronics products, including smartphones and tablets, conducts primary market and product research for LGI and LGE, and enables regional customers to influence the direction of LGI and LGE's future technologies and products.

JURISDICTION

6. This is an action for patent infringement, over which this Court has subject matter jurisdiction pursuant to 28 U.S.C. §§ 1331 and 1338(a).

7. This Court has personal jurisdiction over each of the Defendants consistent with the requirements of California Code of Civil Procedure § 410.10 and the Due Process Clause of the United States Constitution. Each Defendant transacts substantial business in California (and in this District), or has committed and continues to commit acts of patent infringement in California (and in this District) as alleged in this complaint. In addition, on information and belief, LGM maintains places of business in the State of California at 10225 Willow Creek Road, San Diego, California 92131, and 2570 North 1st Street, #360, San Jose, California 95131.

VENUE

8. Venue is proper in this district pursuant to 28 U.S.C. §§ 1391 (b)-(d) and 1400(b) because Defendants are subject to personal jurisdiction in this District, have committed acts of patent infringement in this District, and/or have regular and established places of business in this District.

INTRADISTRICT ASSIGNMENT

9. This is a patent infringement action and is therefore exempt from Intradistrict Assignment under Civil L.R. 3-2(c).

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