

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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APPLE INC.,  
Petitioner,

v.

Parthenon Unified Memory Architecture LLC  
Patent Owner

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**PETITION FOR *INTER PARTES* REVIEW**

**OF**

**U.S. PATENT NO. 5,812,789**

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## I. INTRODUCTION

U.S. Patent No. 5,812,789 (“the ’789 Patent,” APPL1001) is generally directed to a system where a video decoder and another device share memory. *See* APPL1001, Abstract, 3:62-4:11, 5:15-22.

The ’789 Patent alleges that, conventionally, a video decoder would have its own dedicated memory. APPL1001, 2:25-33, 3:52-59. The ’789 Patent suggests that this dedicated memory would “significantly increase the cost of adding a decoder ... to the computer.” APPL1001, 3:57-59. However, before the priority date of the ’789 Patent, others had already recognized the same cost concerns of using a dedicated memory, had proposed to use a shared memory in lieu of a dedicated memory, and had developed arbitration schemes for sharing this memory.

For example, Bowes (APPL1005) recognized the benefits of allowing its digital signal processor (DSP) 20 to use a shared memory (main memory subsystem 14) by arbitrating access to the shared memory among the DSP 20 and other devices, including a CPU 10, all while allowing the DSP to still operate in real time. *See* APPL1005, APPL1006.

The evidence in this petition demonstrates that claims 1-8 and 11-14 of the ’789 Patent are unpatentable under pre-AIA 35 U.S.C. § 103. Accordingly, Apple Inc. (“Petitioner”) respectfully requests that claims 1-8 and 11-14 of the ’789

Patent be held invalid and cancelled.

## II. MANDATORY NOTICES

### A. Real Party-in-Interest

The real party-in-interest is Apple Inc.

### B. Related Matters

As of the filing date of this petition, the '789 Patent has been asserted in:

- *STMicroelectronics v. Motorola Inc.*, 4:03-CV-00276 (E.D. Tex.);
- *Parthenon Unified Memory Architecture LLC v. Apple Inc.*, 2-15-CV-00621 (E.D. Tex.);
- *Parthenon Unified Memory Architecture LLC v. Huawei Tech. Co., Ltd. et al.*, 2:14-CV-00687 (E.D. Tex.);
- *Parthenon Unified Memory Architecture LLC v. Motorola Mobility, Inc.*, 2:14-CV-00689 (E.D. Tex.);
- *Parthenon Unified Memory Architecture LLC v. HTC Corp. et al.*, 2:14-CV-00690 (E.D. Tex.);
- *Parthenon Unified Memory Architecture LLC v. LG Elec., Inc. et al.*, 2:14-CV-00691 (E.D. Tex.);
- *Parthenon Unified Memory Architecture LLC v. Samsung Elecs. Co. Ltd. et al.*, No. 2:14-CV-00902 (E.D. Tex.);
- *Parthenon Unified Memory Architecture LLC v. Qualcomm Inc. et al.*, No. 2:14-CV-00930 (E.D. Tex.);

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