UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC., HTC CORPORATION, AND HTC AMERICA INC.,
Petitioners,

v.

PARTHENON UNIFIED MEMORY ARCHITECTURE LLC,
Patent Owner

Case IPR2016-00923
Patent No. 5,812,789

DECLARATION OF HAROLD S. STONE, PH.D.,
UNDER 37 C.F.R. § 1.68
IN SUPPORT OF PETITIONER REPLY

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I, Harold S. Stone, Ph.D., declare as follows:

I. Introduction

1. I am the Harold S. Stone who has previously submitted a declaration in this proceeding (Ex. 1030). The terms of my engagement, my background, qualifications and prior testimony, and the legal standards and claim constructions I am applying are set forth in my previous declarations. I offer this declaration in reply to the testimony of Prof. Thornton provided in this proceeding (Exs. 2003 and 1043). In forming my opinion, I have considered the materials noted in my previous declarations in these proceedings, as well as the following additional materials:

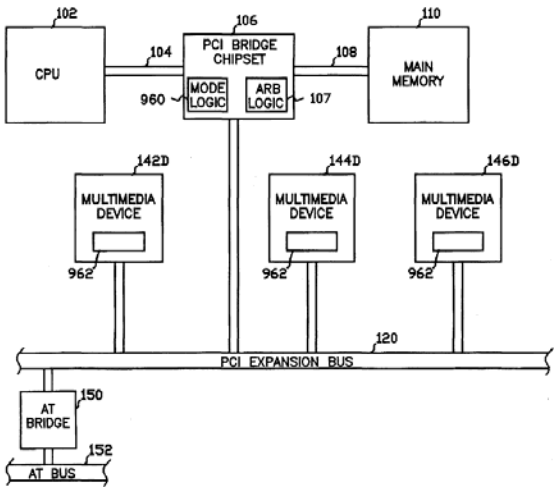
- Exhibit 2003 – Declaration of Mitchell A. Thornton
- Exhibit 1043 – Deposition Testimony of Mitchell A. Thornton
- Exhibit 1045 – U.S. Patent No. 5,461,679 to Normile et al.

II. Lambrecht's Fig. 21 is not limited by Fig. 1.

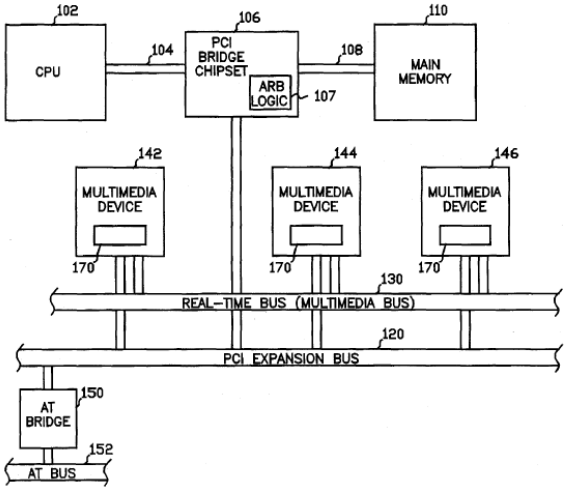
2. In describing Fig. 1, Lambrecht states that "the multimedia devices 142-146 communicate with each other via the PCI bus 120 and also communicate with the CPU and main memory 110 via the PCI bus 120" and that "[t]he multimedia devices 142-146 also communicate data between each other using the real-time bus or multimedia bus 130." Ex. 1032 at 8:20-25. Dr. Thornton thus

concludes that: "one of ordinary skill in the art would understand that when the PCI Expansion Bus (120) of Figure 21 is in the 'normal PCI mode' it operates like the PCI Expansion Bus of the embodiment PUMA of Figure 1. Conversely, when the PCI Expansion Bus (120) of Figure 21 is in the multimedia mode it operates like the multimedia bus (130) of the embodiment of Figure 1." Ex. 2003 ¶ 16-17. This position is incorrect as it ignores the other embodiments of Lambrecht that are more instructive as to functionality of the embodiment in Fig. 21.

3. While the computer system in Fig. 21 is similar to the system Fig.1 in that it includes a CPU 102, a PCI bridge chipset 106, memory 110, and multimedia devices 142-144, the system in Fig. 21 differs in that it includes (1) a single PCI bus that connects the various components and (2) "mode logic which selects between different modes of the PCI bus 120." Ex. 1032 at 26:50-51. For reference, Fig. 21 from my previous declaration is provided for reference:



Ex. 1032, Fig. 21



Ex. 1032, Fig. 1

4. The mode logic "is operable to place the PCI bus 120 in either a normal PCI mode or in a real-time/multimedia mode optimized for multimedia transfers of periodic data." Ex. 1032 at 26:53-56. This allows the multimedia devices to "**communicate with** each other and with the CPU 102 and main **memory 110 via the PCI bus 120**, as is well known in the art." Ex. 1032 at 27:57-59 (emphasis added). The mode logic also allows the multimedia devices to communicate data "using the PCI bus signal lines 120 **when the PCI bus 120 is in the multimedia mode**." Ex. 1032 at 27:59-62 (emphasis added). Thus, contrary to Dr. Thornton's flawed analysis, a POSITA would understand that in Lambrecht's Fig. 21, the PCI bus provides for real-time multimedia data transfers over the PCI bus.

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