

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

AMERICAN MEGATRENDS, INC.,
MICRO-STAR INTERNATIONAL CO., LTD,
MSI COMPUTER CORP.,
GIGA-BYTE TECHNOLOGY CO., LTD., AND
G.B.T., INC.,
Petitioner,

v.

KINGLITE HOLDINGS INC.
Patent Owner

Case IPR2015-01188
Patent 5,836,013

Before PHILLIP J. KAUFFMAN, GLENN J. PERRY, TREVOR M.
JEFFERSON, and BRIAN J. McNAMARA, *Administrative Patent Judges*.

PERRY, *Administrative Patent Judge*.

DECISION
Denying Institution of *Inter Partes* Review
37 C.F.R. § 42.108

INTRODUCTION

American Megatrends, Inc., Micro-Star International Co., Ltd., MSI Computer Corp., Giga-Byte Technology Co., Ltd., and G.B.T., Inc., (collectively, “Petitioner”) filed a Petition (Paper 6, “Pet.”) to institute an *inter partes* review of claims 1, 2, 7, 10, 14, and 18 of Patent 5,836,013 (“the ’013 Patent”) pursuant to 35 U.S.C. § 311 *et seq.* Patent Owner Kinglite Holdings, Inc. filed a preliminary response (Paper 13, “Prelim. Resp.”) to the Petition.

We have jurisdiction under 35 U.S.C. § 314(a), which provides that an *inter partes* review may not be instituted unless the information presented in the Petition shows “there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” Upon consideration of the Petition, Patent Owner’s Preliminary Response, and the evidence of record, we conclude Petitioner has not established a reasonable likelihood it would prevail with respect to at least one of the challenged claims. We, therefore, deny the Petition.

Real Parties in Interest

Petitioner names no real parties in interest other than the parties listed as Petitioner. *See* Pet. 7.

Related Matters

Petitioner indicates that the ’013 Patent is involved in the following litigation: *Kinglite Holdings Inc. v. Giga-Byte Tech. Co. Ltd., et al.*, CV 14-04989 JVS (PJWx) (C.D. Ca); and *Kinglite Holdings Inc. v. Micro-Star Int’l Co. Ltd., et al.*, CV 14-03009 JVS (PJWx) (C.D. Ca). Pet. 6.

Petitioner indicates that the following *inter partes* reviews are related. *American Megatrends Inc., et al. v. Kinglite Holdings Inc.*, IPR2015-01079

Case IPR2015-01188
Patent 5,836,013

(U.S. Pat. No. 6,373,498 B1); *American Megatrends Inc., et al. v. Kinglite Holdings Inc.*, IPR2015-01081 (U.S. Pat. No. 5,987,604); *American Megatrends Inc., et al. v. Kinglite Holdings Inc.*, IPR2015-01094 (U.S. Pat. No. 6,401,202 B1); *American Megatrends Inc., et al. v. Kinglite Holdings Inc.*, IPR2015-01132 (U.S. Pat. No. 6,523,123 B2); *American Megatrends Inc., et al. v. Kinglite Holdings Inc.*, IPR2015-01133 (U.S. Pat. No. 5,732,268); *American Megatrends Inc., et al. v. Kinglite Holdings Inc.*, IPR2015-01140 (U.S. Pat. No. 6,519,659 B1); *American Megatrends Inc., et al. v. Kinglite Holdings Inc.*, IPR2015-01141 (U.S. Pat. No. 6,633,976 B1); *American Megatrends Inc., et al. v. Kinglite Holdings Inc.*, IPR2015-01188 (U.S. Pat. No. 5,836,013); *American Megatrends Inc., et al. v. Kinglite Holdings Inc.*, IPR2015-01189 (U.S. Pat. No. 5,836,013); *American Megatrends Inc., et al. v. Kinglite Holdings Inc.*, IPR2015-01191 (U.S. Pat. No. 6,892,304 B1); and *American Megatrends Inc., et al. v. Kinglite Holdings Inc.*, IPR2015-01197 (U.S. Pat. No. 6,487,656 B1). Paper 14, 1–2.

THE '013 PATENT (Ex. 1001)

Described Invention

The '013 Patent describes chipset (platform)-independent methods for compressing and decompressing system ROM code of a computer (e.g. BIOS, setup program, and one or more option ROMs). Ex. 1001, Abstract. Compressing takes into account chipset particulars needed for reading to and writing from registers associated with a particular chipset by appending computer specific information (e.g., shadow RAM table) to the uncompressed ROM file before compressing portions of it. *Id.*

Illustrative Claim

Claim 1 of the '013 Patent is illustrative of the challenged claims:

1. In a computer having a processor and storage, a computer-implemented method for generating a system read only memory (ROM) computer file that can access the ROM of a target computer, the method comprising the steps of:

receiving, for processing by the processor, a system ROM computer file comprising a non-compressible portion and one or more compressible portions, including a setup program and one or more option ROM images,

the non-compressible portion comprising a decompression program;

appending, to the non-compressible portion, information on accessing the ROM of a target computer;

compressing, via the processor, each compressible portion to generate compressed data;

generating, via the processor, a compressed system ROM computer file comprising the compressed data and the appended non-compressible portion; and

storing the compressed system ROM computer file in the storage.

PETITIONER'S CHALLENGE

Petitioner contends that claims 1, 2, 7, 10, 14, and 18 are unpatentable under 35 U.S.C. §103 because they are obvious based on Schieve¹ and AAPA². Petitioner's challenges are supported by the testimony of Gabriele Sartori, Ph.D. Ex. 1014. Pet. 13.

Schieve describes how to run large diagnostic routines without taxing a computer's operating system resources. Schieve decompresses previously compressed diagnostic routines into video RAM and runs them out of video RAM in an environment created by a boot loader. Ex. 1002, Abstract.

¹ U.S. Patent 5,530,847 – Schieve *et al.*, issued June 25, 1996 (Ex. 1002, “Schieve”)

² The Applicant Admitted Prior Art includes '013 Patent Figures 1–3 (Prior Art) and other “admissions” in the Specification (collectively “AAPA”).

CLAIM CONSTRUCTION

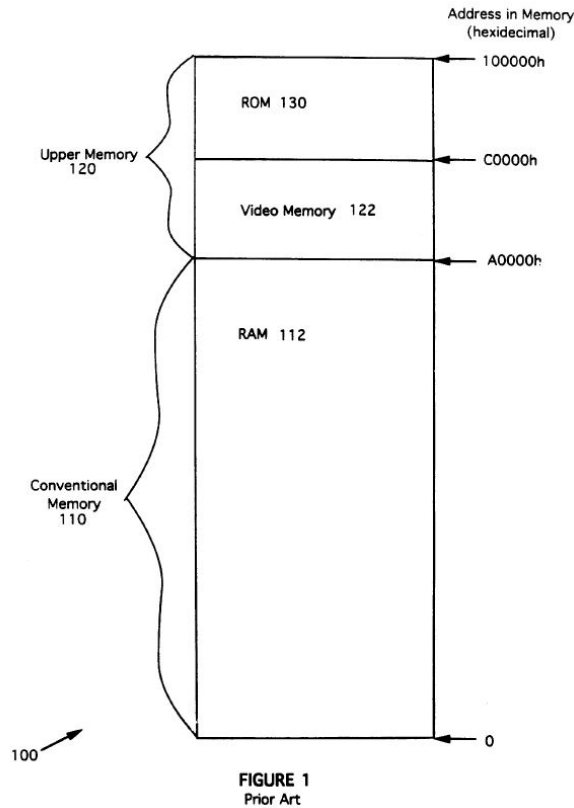
The patent at issue will expire before a final written decision is issued. The Board’s review of the claims of an expired patent is similar to that of a district court’s review. Therefore, the principles set forth by the court in *Phillips v. AWH Corp.*, (words of a claim generally are given their ordinary and customary meaning as understood by a person of ordinary skill in the art in question at the time of the invention) should be applied because the expired claims are not subject to amendment.

Although the parties propose constructions for “setup program” (claims 1, 8, and 10); “conventional memory” (claim 10); “decompressing each compressed portion in the conventional memory to a location in the memory” (claim 10); and “compressible” and “non-compressible” (all challenged claims), we find it necessary to construe only “conventional memory” in order to resolve the scope of claim 10. *See Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999) (only those terms which are in controversy need to be construed, and only to the extent necessary to resolve the controversy).

Conventional memory: Petitioner argues that “conventional memory” should be construed to encompass “any kind of RAM in a personal computer” because a person of ordinary skill in the art “would understand that video RAM and other kinds of RAM were conventional as of the time of invention.” Pet. 10.

Patent Owner argues that “conventional memory” refers specifically to the basic 640K of memory available for running DOS programs (also called DOS memory or low DOS memory. Prelim. Resp. 10 (citing to Ex. 1001, Fig. 1, 2:45–58).

Figure 1 (Prior Art) of the '013, reproduced below, is a graphical representation of typical memory map in a personal computer.



The '013 patent explains Figure 1 as follows:

FIG. 1 is an example graphical representation of a typical memory map 100 in a computer (e.g., an IBM compatible personal computer, any Intel central processing unit (CPU)-based machine, or similar computing devices). Memory 100 is generally divided into two areas: conventional memory 110 and upper memory 120. Conventional memory 110 comprises a random access memory (RAM) 112 address space that is set aside for use by operating systems and application programs. Conventional memory 110 is, for example, located in the 0 to 9FFFFh (Where “h” indicates hexadecimal notation) address range of memory 100. Upper memory 120 is used by the computer hardWare. Upper memory 120 is, for example, located in the A0000h to FFFFFh address range of memory 100. The first 128 kilo

bytes (“K”) of upper memory 120 addresses are generally used for video memory 122. The remaining upper memory addresses (e. g., 0000h to 100000h or the end of memory) are set aside for read only memory (ROM) 130.

Ex. 1001, 2:45–63. We understand from this passage that “conventional memory” referred only to lower memory and not to upper memory.

While we agree with Petitioner that video RAM and other kinds of RAM were conventional in the sense that they were known and used, we are not persuaded that the term “conventional memory” should be construed to include video RAM. The Specification clearly identifies what was meant by “conventional memory.” We therefore adopt Patent Owner’s construction. For purposes of this decision, “conventional memory” refers to the basic 640K of memory available for running DOS programs.

PETITIONER’S PRIOR ART CHALLENGE

We turn now to Petitioner’s prior art challenge and Patent Owner’s arguments set forth in its Preliminary Response to determine whether Petitioner has met the threshold standard of 35 U.S.C. § 314(a).

Petitioner contends that claims 1, 2, 7, 10, 14, and 18 would have been obvious based on Schieve and AAPA under 35 U.S.C. § 103(a), relying on the supporting testimony of Gabrielle Sartori, Ph.D. Pet. 14–29. Claims 1 and 10 are independent. Claims 2 and 7 depend from claim 1 and claims 14 and 18 depend from claim 10.

Patent Owner argues that the Petition should be denied because at least following limitations are not taught by the cited prior art:

- copying the compressed system ROM computer file from the ROM to conventional memory (claims 10, 14, and 18);
- non-compressible portion/compressed portions (all challenged

claims);

- setup program (claims 1, 2, 7, 10, 14, and 18) and option ROM images (claims 1, 2, and 7) are included in the compressible/compressed portion; and

- appending, to the non-compressible portion, information on accessing the ROM of a target computer (claims 1, 2, and 7).

Prelim. Resp. 1.

“copying . . . to conventional memory and decompressing each compressed portion in the conventional memory to a location in the memory” (claim 10)

Petitioner relies upon Schieve as meeting the claim 10 limitation *“copying . . . to conventional memory and decompressing each compressed portion in the conventional memory to a location in the memory.”* Pet. 27. Petitioner reasons that video RAM can be thought of as being in either memory subsystem; that diagnostic routines “could” be stored in system RAM; and that a PHOSITA would understand that copying a compressed file to RAM and then decompressing it would be faster because RAM is faster than ROM. *Id.*

Patent Owner argues that Schieve does not disclose this claim limitation. Prelim. Resp. 12. Patent Owner notes that Schieve decompresses data into video memory and therefore teaches away from storing decompressed diagnostic routines in conventional memory or anywhere other than in video RAM. *Id.* at 12–13 (citing Ex. 1002, 3:46–51, 6:18–26, Fig. 4, and claims 1, 8, 17, 21, 29, and 33).

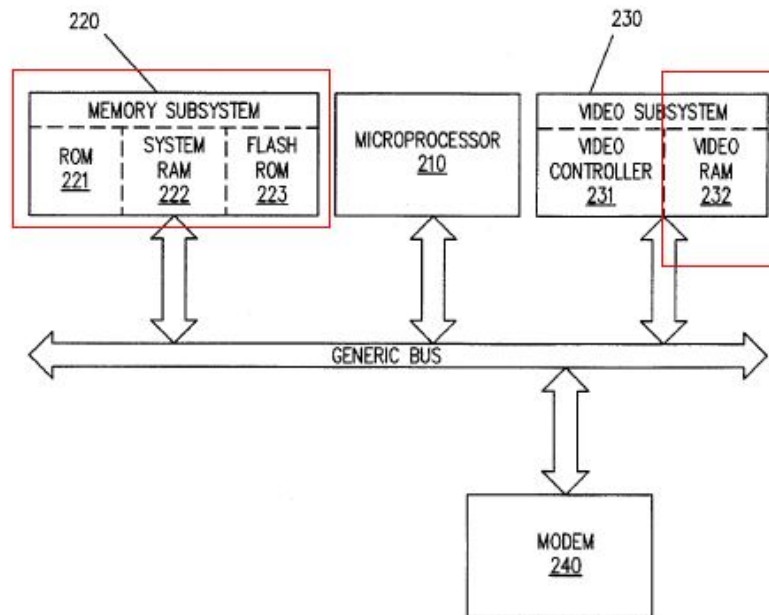
In claim 10, we read the antecedent basis for “the memory” as “conventional memory,” the only “memory” referred to in the claim and appearing just before “the memory.”

Schieve explains solving the problem of running large diagnostic files on a computer that would otherwise tax BIOS hardware handling routines:

In the attainment of the above noted primary object, the present invention is the first to provide a method of loading diagnostic routines in a computer system comprising the steps of (1) executing a boot loading routine stored in non-volatile memory within the computer system, the boot loading routine including a decompression routine, (2) decompressing a driver routine and a compressed diagnostic routine stored in the non volatile memory into video RAM, the driver routine providing an environment in lieu of an operating system of the computer system within which to execute the diagnostic routine and (3) executing the driver routine under control of the boot loading routine.

Ex. 1002, 3:13–25.

In accordance with our construction of “conventional memory,” we agree with Patent Owner’s argument that Schieve’s teaching to a PHOSITA is to utilize video RAM, and not conventional memory, for running a decompressed diagnostic routine. Schieve’s Figure 2 is reproduced below (with annotation).



Schieve describes Figure 2 as a partial block diagram of a PC architecture. Ex. 1002, 4:39–40. Video RAM 232 is shown in Figure 2 in a subsystem separate from memory subsystem 220. As discussed above, the '013 patent itself, in Figure 1 (Prior Art), demonstrates that “conventional memory” (RAM 112) is separate and distinct from “video memory” (video memory 122). Accordingly, this limitation of claim 10 is not met by Schieve.

“a non-compressible portion . . . the non-compressible portion comprising a decompression program.” (claims 1, 2, and 7)

Petitioner argues that Schieve discloses “a non-compressible portion and one or more compressible portions . . . include[ing] a setup program and one or more option ROM images, [the non-compressible portion comprising a decompression program].” Pet. 18–19. Petitioner relies upon AAPA (Fig. 3 of the '013 patent) with regard to the setup and option ROM requirements of this claim limitation. Pet. 18. Petitioner relies upon Schieve as teaching the desirability of compressing *any routine* of the BIOS, assuming it is capable of being compressed. Pet. 19 (citing to Ex. 1014, par.

49). Dr. Sartori's testimony at paragraph 49 of Ex. 1014 states:

49. In Schieve, the system ROM is comprised of a flash ROM, which has limited memory space. To counteract these limitations, Schieve teaches the general desirability of compressing data files where possible, such that "the object [of the Schieve's invention] is simply to compress the data to fit it within the confines of flash ROM [sic]." (Ex. 1002, 6:5–8) (emphasis omitted).

Petitioner argues that Schieve describes a decompression routine. Pet. 24 (citing Ex. 1002, 3:13–25) (reproduced above). Exhibit 1002 at column 3, lines 13–25 discloses that the boot loading routine includes a decompression routine. It further discloses that the driver routine and the diagnostic routine must have been compressed (they are being decompressed). It also tells us that the driver routine provides an environment for executing the diagnostic routine. However, we find nothing in this passage that instructs that the decompressing routine should be stored in a non-compressible portion.

The remaining portion of the SUMMARY OF THE INVENTION (containing the above-quoted passage) discusses the importance of correctly storing the diagnostic routine so that the decompression routine can properly decompress it for use. *Id.* at 3:25–51.

Patent Owner argues that Schieve and AAPA do not disclose "a non-compressible portion . . . the non-compressible portion comprising a decompression program." Prelim. Resp. 13. We agree.

"The setup program and one or more option ROM images are included in the compressible portion" (claims 1, 2, and 7)

Petitioner relies upon Schieve's visual interface by which a user selects the diagnostic routines as corresponding to the claimed setup

program because it “accomplishes the [same] functionality” of a setup program that is stored with BIOS. Pet. 18.

Patent Owner argues that Schieve and AAPA do not disclose “the setup program and one or more option ROM images are included in the compressible portion.” Prelim. Resp. 14–17. The AAPA discloses optional ROM images, as well as a setup program that accomplishes the same functionality of a conventional setup program stored with BIOS. *Id.* (citing Ex. 1001, 1:40–41). The art does not disclose the setup program and the option ROM images that are included *in a compressible portion* of a system ROM computer file, as required.

We agree with Patent Owner that Petitioner has not demonstrated that this claim feature is taught by Schieve and AAPA.

For the above-stated reasons, Petitioner’s showing regarding claims 1 and 10 is deficient. Therefore we do not institute. The Petition has at least the following additional shortcomings.

“appending, to the noncompressible portion, information on accessing the ROM of a target computer”(claims 1, 2, and 7)

Petitioner argues that Schieve teaches “*appending, to the noncompressible portion, information on accessing the ROM of a target computer*” because Schieve’s boot loading and compressed diagnostic routines are “checksum tested” to make certain of code integrity. Pet. 20 (citing Ex. 1002, 5:57–60). Further, according to Petitioner, “the boot loading routine decompresses a first diagnostic routine from flash ROM into video RAM (block 470).” *Id.* (citing Ex. 1002, 5:57–60).

We do not regard comparing checksums as appending information on accessing the ROM of a target computer.

“generating, via the processor, a compressed system ROM computer file comprising the compressed data and the appended non-compressible portion.” (claims 1, 2, and 7)

Patent Owner further argues with respect to claim 1 that Schieve does not disclose “generating, via the processor, a compressed system ROM computer file comprising the compressed data *and the appended non-compressible portion.*” Prelim. Resp. 18–19.

We agree. Because Schieve does not disclose the “appending” step, discussed above, Schieve also fails to disclose this limitation, which requires generating a file containing the appended information.

“the system ROM computer file comprises a basic input/output system (BIOS) and the BIOS comprises the non-compressible portion” (claim 2)

Patent Owner argues that Schieve does not disclose “the system ROM computer file comprises a basic input/output system (BIOS) and the BIOS comprises the non-compressible portion” Prelim. Resp. 19.

This limitation appears in claim 2, which depends from claim 1. Petitioner contends that “Schieve discloses that the ROM computer file is a BIOS and the BIOS comprises the non-compressible portion.” Pet. 22 (citation omitted). Petitioner does not provide explain sufficiently why this is the case. Schieve also does not specify any components that are non-compressible, as discussed above.

Claims 7, 14, and 18

Claim 7 depends from claim 1. For the reasons stated above with respect to claim 1, we are persuaded by Patent Owner’s arguments. Claims 14 and 18 are not separately argued.

CONCLUSION

For the foregoing reasons, we determine that the information presented in the Petition does not establish a reasonable likelihood that Petitioner would prevail in establishing the unpatentability of claims 1, 2, 7, 10, 14, and 18 under 35 U.S.C. § 103 as obvious over Schieve and the AAPA.

ORDER

Accordingly, it is

ORDERED that pursuant to 35 U.S.C. § 314, an *inter partes* review is hereby denied as to all grounds raised in the Petition for the reasons stated above and no trial is instituted.

PETITIONER:

Vivek Ganti
Gregory Ourada
HILL, KERTSCHER & WHARTON, LLP
vg@hkw-law.com
go@hkw-law.com

PATENT OWNER

Christopher Frerking
chris@ntknet.com

George C. Summerfield
STADHEIM & GREAR LTD.
summerfield@stadheimgear.com