

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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APPLE, INC.,  
Petitioners,

v.

REALTIME DATA LLC,  
Patent Owner.

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Case IPR2016-01365  
Patent 7,181,608 B2

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Before DEBRA K. STEPHENS, GEORGIANNA W. BRADEN, and  
JASON J. CHUNG, *Administrative Patent Judges*.

STEPHENS, *Administrative Patent Judge*.

FINAL WRITTEN DECISION  
*35 U.S.C. § 318 and 37 C.F.R. § 42.73*

## INTRODUCTION

We have jurisdiction to hear this *inter partes* review under 35 U.S.C. § 6, and this Final Written Decision is issued pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73. For the reasons that follow, we determine that Petitioner has shown by a preponderance of the evidence that claims 1–24 of U.S. Patent No. 7,181,608 B2 (Ex. 1001, “the ’608 patent”) are unpatentable.

### I. BACKGROUND

#### A. Procedural History

Apple Inc. (Petitioner) filed a Petition (Paper 2, “Pet.”) to institute an *inter partes* review of claims 1–31 of the ’608 patent. Realtime Data, LLC (“Patent Owner”) filed a Preliminary Response (Paper 9, “Prelim. Resp.”).

Petitioner challenged claims 1–24 of the ’608 patent on the following grounds:

Claims	Basis	References <sup>1</sup>
1–31	§ 103 (a)	Sukegawa and Dye
1–31	§ 103 (a)	Sukegawa, Dye, and Settsu
1–31	§ 103 (a)	Sukegawa, Dye, and Burrows
1–31	§ 103 (a)	Sukegawa, Dye, Settsu, and Burrows

<sup>1</sup>

Reference	Patent Number	Exhibit
Sukegawa	US 5,860,083 (issued Jan. 12, 1999)	1005
Dye	US 6,145,069 (filed Apr. 26, 1999)	1008

Petitioner also relied on the Declaration of Dr. Charles J. Neuhauser (Ex. 1003) to support its challenges.

Pursuant to 35 U.S.C. § 314(a), we instituted an *inter partes* review of:

Claims	Basis	References
1–31	§ 103 (a)	Sukegawa and Dye
1–6 and 9–17	§ 103 (a)	Sukegawa, Dye, and Settsu
1–6 and 9–17	§ 103 (a)	Sukegawa, Dye, and Burrows
1–6 and 9–17	§ 103 (a)	Sukegawa, Dye, Settsu, and Burrows

(Paper 11 “Dec. to Inst.”).

After institution of trial, Patent Owner filed a Patent Owner Response (Paper 14, “PO Resp.”), to which Petitioner filed a Reply (Paper 16, “Reply”). An oral argument was held on September 20, 2017. A transcript of the oral argument is included in the record (Paper 25 (“Tr.”)).

#### *B. Related Matters*

The parties identify the following cases as related to the challenged patent: *Realtime Data, LLC d/b/a IXO v. Microsoft Corporation*, Case No. 4:14-cv-00827 (E.D. Tex.) and *Realtime Data, LLC d/b/a IXO v. Apple, Inc.*, Case No. 3:16-cv02595 (N.D. Cal.) (transferred from *Realtime Data, LLC v. Apple, Inc.*, Case No. 6:15-cv-00885 (E.D. Tex.)) (Pet. 1; Paper 8, 2).

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Settsu	US 6,374,353 B1(filed Mar. 3, 1999)	1006
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Michael Burrows et al., *On-line Data Compression in a Log-structured File System* (1992) (hereinafter “Burrows”) (Exhibit 1007).

Concurrently with this petition, Petitioner has filed for a petition for *inter partes* review of U.S. Patent No. 8,090,936 (IPR2016-01366) (Paper 8, 2).

*C. The '608 Patent (Ex. 1001)*

The '608 patent, entitled “Systems and Methods for Accelerated Loading of Operating Systems and Application Programs,” relates to “providing accelerated loading of operating system and application programs upon system boot or application launch,” and to the use of data compression and decompression techniques for such purpose (Ex. 1001, Title, 1:16–21). The Specification discusses the limits of prior art storage devices, particularly the significant bandwidth limitations of “mass storage devices,” such as hard disk drives and their “inherent unreliability” (*id.* at 1:39–52, 2:6–15, 38–45).

The Specification of the '608 patent is directed to “data storage controllers that provide increased data storage/retrieval rates that are not otherwise achievable using conventional disk controller systems and protocols to store/retrieve data to/from mass storage devices” (*id.* at 5:34–38). According to the Specification, “accelerated data storage/retrieval mitigates the traditional bottleneck associated with, e.g., local and network disk accesses” (*id.* at 5:67–6:2). The Specification describes that

“accelerated” data storage comprises receiving a digital data stream at a data transmission rate which is greater than the data storage rate of a target storage device, compressing the input stream at a compression rate that increases the effective data storage rate of the target storage device and storing the compressed data in the target storage device.

(Ex. 1001, 5:48–54) and further describes that

accelerated data retrieval comprises retrieving a compressed digital data stream from a target storage device at the rate equal

to, e.g., the data access rate of the target storage device and then decompressing the compressed data at a rate that increases the effective data access rate of the target storage device

(*id.* at 5:61–67).

Figure 1, “a block diagram of a data storage controller according to one embodiment of the present invention” (*id.* at 4:40–41), is reproduced below.

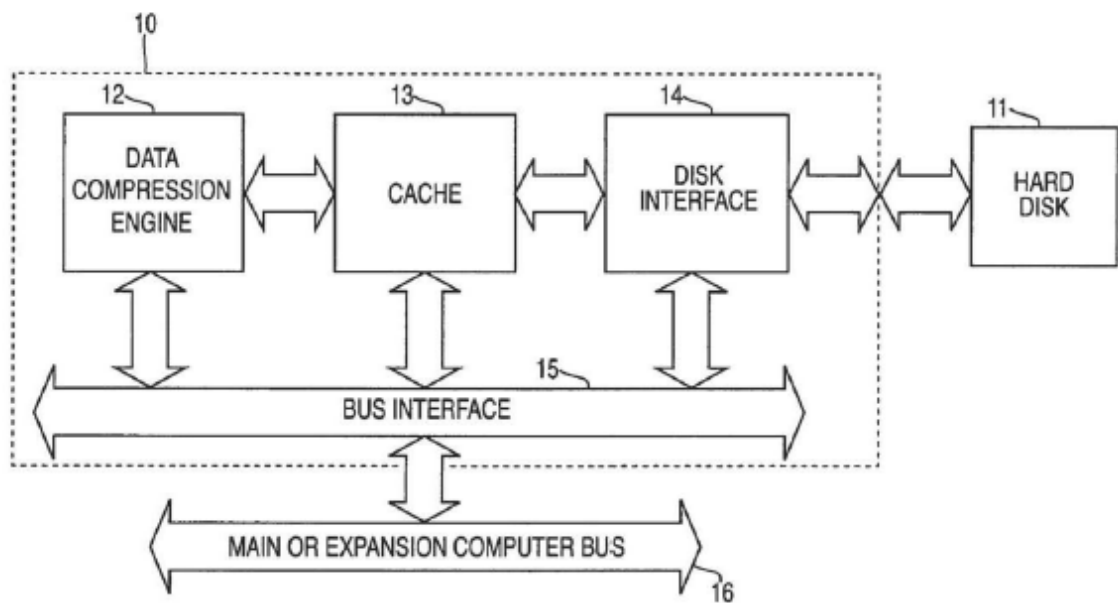


FIG. 1

Figure 1 illustrates an embodiment of data storage controller 10 (*id.* at Fig. 1, 6:3–5). Data storage controller 10 includes data compression engine (DCE) 12 which compresses/decompresses data stored/retrieved from a mass storage unit such as hard disk 11, to provide accelerated data

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