

The opinion in support of the decision being entered today was **not** written for publication and is **not** binding precedent of the Board.

Paper No. 23

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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**Ex parte** ROBERT G. HILLIS and ERIC C. RASMUSSEN

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Appeal No. 1999-2375  
Application No. 08/892,822

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ON BRIEF

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Before FLEMING, LALL, and DIXON, **Administrative Patent Judges**.  
DIXON, **Administrative Patent Judge**.

### **DECISION ON APPEAL**

This is a decision on appeal from the examiner's final rejection of claims 1, 6, 11 and 15-18, which are all of the claims pending in this application.

We AFFIRM-IN-PART.

## BACKGROUND

The appellants' invention relates to a data processor having BIOS packing compression/decompression architecture. An understanding of the invention can be derived from a reading of exemplary claims 1 and 6, which are reproduced below.

1. A data processing system capable of an expedited initialization process, comprising:

a central processing unit (CPU);

a system memory, including system RAM memory, for storing data in the form of electrical signals;

a first port for receiving an input device generating electrical input signals;

at least one second port for supplying electrical output signals to output devices;

a system bus logically interconnecting the CPU, the system memory and the first and second ports;

the CPU including a BIOS having BIOS code, an initial portion of the BIOS code for carrying out prescribed functions being in uncompressed form, including code required to enable the system memory and including power on self test (POST) code, and a remaining portion of the BIOS code for carrying out other prescribed functions being in compressed form, for carrying out prescribed functions including converting operating signals developed by an operating system executed by the CPU into electrical signals compatible with devices that are responsive to signals provided by the CPU to the system bus;

means for writing the initial portion of the BIOS code for carrying out the prescribed functions in uncompressed form and the remaining compressed portion of the BIOS code for carrying out the other prescribed functions to the system RAM memory; and

means for decompressing selected portions, for carrying out the prescribed functions, of the compressed BIOS code written to and stored in the system RAM memory for expediting the initialization process of the data processing system.

6. A method of expediting initialization of a data processing system of a type having a central processing unit (CPU), a ROM storing permanent BIOS code and a data processing system memory for selectively storing data, including system RAM memory and a ROM containing, in uncompressed form, a first portion of BIOS code for carrying out prescribed functions sufficient to enable the system memory and, in compressed form, another portion of BIOS code for carrying out other prescribed functions, the method comprising, the steps of:

in response to a cold boot call,

(a) executing the uncompressed portion of BIOS for carrying out the prescribed functions from the ROM to enable the system memory;

(b) copying the uncompressed portion for carrying out the prescribed functions and the compressed portion of the BIOS code for carrying out the other prescribed functions from the ROM to the system RAM memory;

(c) expediting the initialization process by decompressing a selected portion of the compressed portion of the BIOS code for carrying out the prescribed functions in the system RAM memory to another prescribed and lower address location region of the system RAM memory; and

(d) executing the decompressed BIOS code for carrying out the prescribed functions from the system RAM memory.

The prior art references of record relied upon by the examiner in rejecting the appealed claims are:

Bealkowski et al. (Bealkowski)	5,210,875	May 11, 1993
Chambers, IV (Chambers)	5,481,701	Jan. 2, 1996
		(Filed Feb. 25, 1992)
Kikinis	WO 94/19768	Sep. 1, 1994
(PCT International Patent Application)		

Claims 1, 6, 11, and 15-18 stand rejected under 35 U.S.C. § 103 (a) as being unpatentable over Bealkowski in view of Kikinis and Chambers.

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Rather than reiterate the conflicting viewpoints advanced by the examiner and the appellants regarding the above-noted rejections, we make reference to the examiner's answer (Paper No. 19, mailed Apr. 26, 1999) for the examiner's reasoning in support of the rejections, and to the appellants' brief (Paper No. 18, filed Mar. 26, 1999) and reply brief (Paper No. 20, filed Jun. 28, 1999) for the appellants' arguments thereagainst.

### **OPINION**

In reaching our decision in this appeal, we have given careful consideration to the appellants' specification and claims, to the applied prior art references, and to the respective positions articulated by the appellants and the examiner. As a consequence of our review, we make the determinations which follow.

Appellants argue that the time savings and cost savings achieved by the "uniquely packed and handled BIOS" by transfer of system control is significant and speaks to the strength of the invention. (See brief at page 4.) We find no support in the language of independent claim 1 to support this argument. Appellants argue that the claims were amended to provide "functional organization" and "prescribed functions." (See brief at page 4.) We find no specific details in the language of independent claim 1 to identify the specific function or their role in the operation. Appellants further argue that the process provides for decompression only when space is available. (See brief at page 4.) Again, we find no support in the language of claim 1 for this argument. Appellants argue at pages

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5-7 of the brief that the combination of the three references does not teach or suggest the claimed invention and that the examiner's position is not supportable. We disagree with appellants. Appellants argue that the examiner's inclusion of the teaching of Chambers to minimize the decompression of the compressed protocol of Kikinis would not have been for the same reasons as the claimed invention since the examiner maintains that the compression of the BIOS would have been to save space. Appellants argue that the motivation of the claimed invention was to decrease the time for bootstrapping. (See brief at page 6 and specification at page 5.) We agree with appellants that the reasons are not the same, but there is no requirement that they be the same. With respect to claim 1, we note that there is no limitation concerning decreasing the bootstrapping time. Therefore, this argument is not persuasive.

The examiner maintains that the shadowing of the BIOS in Bealkowski in combination with the compression of a portion of the BIOS after the initial portion in Kikinis would have met the invention as claimed, but for the Kikinis reference which does not teach the decompressing of only the required part of the BIOS code. (See answer at pages 3-4.) With respect to independent claim 1, we do not find any limitation of the decompressing of only a required part of the BIOS. The examiner adds Chambers to teach limiting the decompression of compressed data. In our view, we find no limitation for limiting the decompression of the compressed portions of the BIOS in claim 1. The

language of claim 1 recites “means for decompressing selected portions, for carrying out the prescribed functions, of the compressed BIOS code written to and stored in the system RAM memory for expediting the initialization process of the data processing system.” In our view, the selected portions of the compressed BIOS may be the remainder of the BIOS, since there are plural portions which individually are a part, but add up to the whole remainder. Therefore, we find that the examiner need not rely on the teachings of Chambers to teach or suggest decompression of less than the whole compressed portion of the BIOS. Consequently, we agree with the examiner that the combination would have met the limitations of independent claim 1 as claimed.

While we note that appellants have additionally grouped dependent claim 11 and independent claims 6, 16 and 17 together with independent claim 1 at page 3 of the brief, we note that independent claims 6, 16 and 17 specifically recite decompressing a “selected portion” of the compressed BIOS. In view of our above interpretation, it would be unfair to group these claims together. Therefore, we address them separately as a group, but we sustain the rejection of dependent claim 11 with the group including independent claim 1.

In view of appellants’ argument concerning decompressing a portion or part of the compressed BIOS, and viewing the prior art applied as a whole, we agree with appellants that we find no motivation in the prior art to make the combination of teachings as

maintained by the examiner. Furthermore, we find that the examiner has not established a convincing line of reasoning for the combination separate for the teachings of the references. While each of the references teaches a portion of the claimed invention, we do not find a motivation to weave them together to achieve the invention as recited in independent claims 6, 16 and 17. While we do find motivation to provide for the shadowing of the BIOS in Bealkowski with the compression of the BIOS in Kikinis, we do not find any motivation to look to the teachings of Chambers to decompress a portion of the compressed BIOS. From our understanding of Chambers, Chambers is concerned with direct reads from compressed data files and these data files are requested in response to an application program which issues data file access requests. (See Chambers at columns 3-4.) We find that these data access requests do not suggest the decompression of a portion of a compressed BIOS and the examiner has not addressed the difference between a BIOS and an application program. Therefore, we agree with appellants and find that the examiner has not established a *prima facie* case of obviousness with respect to independent claims 6, 16 and 17.

With respect to dependent claim 15, appellants argue the difference in reasons for compressing and decompressing the BIOS and rely on the patentability of dependent claim 11. (See brief at page 7.) Since we sustained the rejection of dependent claim 11 with independent claim 1, and since no specific arguments were made for patentability of

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claim 15, we similarly sustain the examiner's rejection of dependent claim 15. As discussed above, we find no support in the language of claims 1, 11 and 15 for the difference in motivation in the prior art for the split in the BIOS. Therefore, this argument is not persuasive.

With respect to independent claim 18, appellants argue that the theory of writing to and storing the decompressed BIOS to a different location than that of the storage of the compressed BIOS effects the speed and swiftness of operation. (See brief at page 7.) But appellants do not provide specific argument to distinguish this from the prior art. Therefore, this argument is not persuasive. We note that independent claim 18 contains similar language with respect to plural portions of the BIOS as discussed above regarding independent claim 1. Therefore, we will sustain the rejection of independent claim 18.

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Appellants argue that there is no suggestion to combine the teachings of the prior art references at pages 8-11 of the brief. We have addressed this argument with respect to the individual groups of claims.

Appellants argue the teachings of the references individually at page 11 of the brief. Since these arguments do not consider the combination of teachings, these arguments are not persuasive. Appellants argue that decompression is only done when space is available. (See brief at page 11.) Again, we find no support in the language of the independent claims for this argument. Therefore, this argument is not persuasive. Appellants argue that one of the most distinguishing features of the appellants' innovation is the reliance of the invention on functional organization, and not address organization. (See brief at page 11.) We find no support for this argument in the language of the independent claims; therefore, this argument is not persuasive. Appellants argue that they have set forth "the uniquely packed BIOS" and have resulted in time and cost savings. (See brief at page 12.) Again, we find no support for these arguments in the language of the independent claims; therefore, these arguments are not persuasive.

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**CONCLUSION**

To summarize, the decision of the examiner to reject claims 1, 11, 15 and 18 under 35 U.S.C. § 103 is affirmed, and the decision of the examiner to reject claims 6, 16 and 17 under 35 U.S.C. § 103 is reversed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

**AFFIRMED-IN-PART**

MICHAEL R. FLEMING	)	
Administrative Patent Judge	)	
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	)	BOARD OF PATENT
PARSHOTAM S. LALL	)	APPEALS AND
Administrative Patent Judge	)	INTERFERENCES
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JOSEPH L. DIXON	)	
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