

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* WILLIAM J. ARMSTRONG, ROBERT J. BATTISTA,  
CHRISTOPHER FRANCOIS, and NARESH NAYAR

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Appeal 2007-1776  
Application 10/418,566  
Technology Center 2100

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Decided: December 17, 2007

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*Before* ANITA PELLMAN GROSS, ALLEN R. MACDONALD, and  
ROBERT E. NAPPI, *Administrative Patent Judges*.

MACDONALD, *Administrative Patent Judge*.

DECISION ON APPEAL  
STATEMENT OF THE CASE

Appellants appeal a Final Rejection of claims 1-23 under 35 U.S.C.  
§ 134. We have jurisdiction under 35 U.S.C. § 6(b).

According to Appellants, the invention is a method and system for  
updating a portion of code running on a system without requiring a system

Appeal 2007-1776  
Application 10/418,566

reboot. (Spec. 5-6, ¶[0021].) Tasks that are in a quiesced state are updated while the code is running. (*Id.*)

Claim 1 is exemplary and is reproduced below:

1. A method for applying an update to an executable component while the executable component is running, comprising:

receiving the update;

determining if each task that may be impacted by the update is in an identifiable quiesced state; and

applying the update to the executable component while the executable component is running only if it is determined that each task that may be impacted by the update is an identifiable quiesced state.

The prior art relied upon by the Examiner in rejecting the claims on appeal is:

Marron	US 5,359,730	Oct. 25, 1994
Lindholm et al.	US 5,797,004	Aug. 18, 1998
Bugnion et al.	US 6,075,938	Jun. 13, 2000

Claims 1, 2, 5, 6, 14, 16, 17, 22, and 23 are rejected under 35 U.S.C. § 102(b) as being anticipated by Marron.

Claims 3, 4, 7, 8, and 15 are rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of Marron and Lindholm.

Claim 18 is rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of Marron and Bugnion.

Appeal 2007-1776  
Application 10/418,566

Claims 9-13 and 19-21 are rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of Marron, Bugnion, and Lindholm.

We affirm.

#### ISSUE

The Examiner finds that Marron discloses determining and applying steps comprising “determining if each task that may be impacted by the update is in an identifiable quiesced state, and applying the update to the executable component while the executable component is running only if it is determined that each task that may be impacted by the update is in an identifiable quiesced state.” (Answer 3-5.) Appellants allege that the Examiner erred in rejecting claims 1-23 because Marron does not disclose the determining and applying steps. (Br. 10-15 and Reply Br. 2-4.)

Thus the issue is whether Marron discloses the determining and applying steps.

#### FINDINGS OF FACT

The following Findings of Fact (FF) are shown by a preponderance of the evidence.

##### *Marron*

1. Marron discloses installing new versions of resident programs in a data processing system while the system is running. (Col. 5, ll. 21-28.) As an example, Marron discloses installing new versions of operating system modules while the system is running and one or

more processes are executing which use and access such modules.

(Col. 5, ll. 29-32.)

2. Marron discloses that when a new version of a program is installed, every invocation of the old version of the program is intercepted by a dynamic software update facility (DSUF). (Col. 5, ll. 33-35; Col. 8, l. 63 – Col. 9, l. 5; and Fig. 3, items 68 and 70.) The DSUF determines whether the state of the process which invoked the program is unsafe or safe. (Col. 5, ll. 38-39.) If the process is "unsafe," the DSUF causes execution of the old version of the program. (*Id.*) If the process is "safe," the DSUF causes execution of the new version of the program. (Col. 5, ll. 39-41.)
3. Marron discloses that when an update is first installed, all processes are initially considered unsafe. (Col. 5, ll. 41-42 and Col. 7, ll. 49-53.) Marron discloses that a process becomes "safe" at a safety point. (Col. 9, ll. 26-28 and 49-52.) Marron discloses that the DSUF 28 monitors for whether a process hits a safety point. (Col. 8, ll. 63-66.)

#### PRINCIPLES OF LAW

Appellants have the burden on appeal to the Board to demonstrate error in the Examiner's position. *See In re Kahn*, 441 F.3d 977, 985-86 (Fed. Cir. 2006) ("On appeal to the Board, an applicant can overcome a rejection [under § 103] by showing insufficient evidence of *prima facie* obviousness or by rebutting the *prima facie* case with evidence of secondary

indicia of nonobviousness.”) (quoting *In re Rouffet*, 149 F.3d 1350, 1355 (Fed. Cir. 1998)).

“A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631 (Fed. Cir. 1987).

In the absence of separate arguments with respect to claims subject to the same rejection, those claims stand or fall with the claim for which an argument was made. *See In re Young*, 927 F.2d 588, 590 (Fed. Cir. 1991). *See also* 37 C.F.R. § 41.37(c)(1)(vii)(2004).

## ANALYSIS

### *Claim I*

#### *Claim Construction – Part I*

First, we construe the term “quiesced state” in the determining and applying steps. During examination of a patent application, a claim is given its broadest reasonable construction consistent with the specification. *In re Prater*, 415 F.2d 1393, 1404-05 (CCPA 1969).

Appellants’ Specification defines “quiesced state”:

[a]s used herein, the term quiesced state generally refers to an identifiable state of a processor or task from which it is known the processor or task will *not return to executing in a portion of code that is being replaced by the update*.

(Emphasis added) (Spec. 5-6, ¶[0021].)

We acknowledge that the Examiner and Appellants define “quiesced state” to involve waiting or inactivity (Ans. 4 and 26 and App. Br. 12), however, waiting or inactivity are but examples of a “quiesced state.” We broadly and reasonably construe “quiesced state” to require not returning to executing code that is being replaced by an update.

### *Claim Construction – Part 2*

Second, we construe the term “each task” in the determining and applying steps. Appellants argue that the phrase “each task” precludes the Examiner’s construction of the claim such that “some components which are not marked safe may continue execution of old code while other components which are marked safe may begin executing the new code.” (App. Br. 12). The Examiner contends that the claim limitations do not recite that “all tasks” to be updated are quiesced at the same time. (Ans. 26). The Appellants counter that the Examiner has misconstrued the claims. (Reply Br. 2-3).

The issue before us is quite simple. The Examiner is construing the determining and applying steps (e.g. claim 1 *supra*) as follows:

[sequentially in time] determining if each task that may be impacted by the update is in an identifiable quiesced state; and

[sequentially in time] applying the update to the executable component while the executable component is running only if it is determined that each task that may be impacted by the update is an identifiable quiesced state.

Whereas, Appellants are construing the determining and applying steps as follows:

determining if each task that may be impacted by the update is in an identifiable quiesced state; and

[simultaneously in time] applying the update to the executable component while the executable component is running only if it is determined [for all tasks,] that each task that may be impacted by the update is an identifiable quiesced state.

We conclude that either construction is appropriate given the breadth of the claim language. We also note that Appellants' specification uses more specific language which precludes the Examiner's construction (e.g., "all tasks and processors are in a quiesced state when a concurrent update is applied"). (Spec. 14, ¶ [0045]). However, this more specific language of the specification is not found in the claims.

#### *Anticipation Analysis*

Marron discloses updating a process while the process is executing. (FF 1.) Marron discloses that after a new version of a module is installed, execution of the new version of the module is permitted when a process which invoked the module is considered "safe"; otherwise execution of the old version of the module occurs. (FF 2-3.) Marron discloses that a process becomes "safe" at a safety point. (FF 3.) Marron discloses that the DSUF 28 monitors for whether a process hits a safety point. (FF 3.) Accordingly, we find that the old version of the module is replaced by an update in the

form of a new version of the module. We also find that after a process reaches a safety point and enters a safe state, the process invokes execution of a new version of the module, and, thereby, the process in the safe state does not return to causing execution of an old version of the module. We find that Marron's permitting execution of an update in response to a process reaching a safe state discloses Appellants' quiesced state. We find this because in response to both, the process does not return to causing execution of an old version of a module but rather, the process causes execution of a new, updated version of the module. Thus, Appellants' quiesced state and Marron's safe state are the same. We find that Marron's process, which involves (1) determination of whether a process is at a safety point, (2) updating a process while the process is executing, and (3) permitting execution of a new (updated) version of a module after a safety point, satisfies the determining and applying steps of claim 1.

Accordingly, we find that Appellants have not shown that the Examiner erred in rejecting claim 1 as anticipated by Marron.

#### *Other Claims*

Appellants also allege Marron does not disclose the determining and applying steps of independent claims 5, 14, and 17 but does not present any other arguments with regard to those claims.<sup>1</sup> (Br. 11-13 and Reply Br. 2-

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<sup>1</sup> We note that claim 17 does not recite the determining step using the same language of claim 1 (as argued by Appellants). However, apart from the

Appeal 2007-1776  
Application 10/418,566

3.) Claims 5, 14, and 17 are subject to the same rejection as that which pertains to claim 1 and therefore fall with claim 1. In addition, claims 2, 6, 16, 22, and 23 are subject to the same rejection as that which pertains to claim 1 and therefore fall with claim 1.

As to dependent claims 3, 4, 7, 8, and 15, Appellants merely reference or repeat the arguments made with respect to claim 1 (Br. 14 and Reply Br. 3). Appellants have presented no arguments regarding the combination of Lindholm with Marron. Therefore, as to the rejection of these claims, the Appellants have not shown Examiner error for the same reasons discussed *supra* with respect to claim 1.

As to dependent claim 18, Appellants merely reference or repeat the arguments made with respect to claim 1 (Br. 14). Appellants have presented no arguments regarding the combination of Bugnion with Marron. Therefore, as to the rejection of this claim, the Appellants have not shown Examiner error for the same reasons discussed *supra* with respect to claim 1.

As to dependent claims 9-13 and 19-21, Appellants merely reference or repeat the arguments made with respect to claim 1 (Br. 14-15 and Reply Br. 3-4). Appellants have presented no arguments regarding the combination of Bugnion and Lindholm with Marron. Therefore, as to the

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allegations made with regard to the determining step, Appellants have not alleged any Examiner error in finding that claim 17 is anticipated by Marron. (Br. 11-13 and Reply Br. 2-3.)

Appeal 2007-1776  
Application 10/418,566

rejection of these claims, the Appellants have not shown Examiner error for the same reasons discussed *supra* with respect to claim 1.

#### CONCLUSIONS OF LAW

We conclude that:

- (1) Appellants have not shown that the Examiner erred in finding claims 1, 2, 5, 6, 14, 16, 17, 22, and 23 anticipated by Marron under 35 U.S.C. § 102(b);
- (2) Appellants have not shown that the Examiner erred in finding claims 3, 4, 7, 8, and 15 unpatentable over the combined teachings and suggestions of Marron and Lindholm under 35 U.S.C. § 103(a);
- (3) Appellants have not shown that the Examiner erred in finding claim 18 unpatentable over the combined teachings and suggestions of Marron and Bugnion under 35 U.S.C. § 103(a); and
- (4) Appellants have not shown that the Examiner erred in finding claims 9-13 and 19-21 unpatentable over the combined teachings and suggestions of Marron, Bugnion, and Lindholm under 35 U.S.C. § 103(a).
- (5) Claims 1-23 are not patentable.

#### DECISION

The Examiner's rejection of claims 1, 2, 5, 6, 14, 16, 17, 22, and 23 under 35 U.S.C. § 102(b) is affirmed.

The Examiner's rejection of claims 3, 4, 7-13, 15, and 18-21 under 35 U.S.C. § 103(a) is affirmed.

Appeal 2007-1776  
Application 10/418,566

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED

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