

The opinion in support of the decision being entered today is *not* binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte PHILIP N. BALLAI

Appeal 2007-2149
Application 10/224,099
Technology Center 2100

Decided: September 27, 2007

Before JOSEPH F. RUGGIERO, HOWARD B. BLANKENSHIP, and SCOTT R. BOALICK, *Administrative Patent Judges*.

BLANKENSHIP, *Administrative Patent Judge*.

DECISION ON APPEAL

This appeal involves claims 1-20, the only claims pending in this application. We have jurisdiction under 35 U.S.C. §§ 6(b), 134(a).

INTRODUCTION

The claims relate to a system and method for automatically updating a firmware program in the non-volatile memory of a portable card (e.g., a wireless radio card). (Abstract.) Claim 1 is illustrative:

1. A method for automatically updating a firmware program, comprising the steps of:

(a) determining, during an initialization process of a portable card by a software driver for the portable card, a first version of the firmware program, the first version being currently stored in a non-volatile memory of the card, the card being connected to a computing device;

(b) comparing the first version with a second version of the firmware program;

(c) automatically updating the first version with the second version in the non-volatile memory if the second version is a subsequent version of the firmware program, wherein the software driver automatically updates the firmware program independently of a further software application for the portable card; and

(d) after step (c), activating the card using the second version.

The Examiner relies on the following prior art references to show unpatentability:

Beaverton	US 5,210,854	May 11, 1993
Krishan	US 5,822,692	Oct. 13, 1998
Salgado	US 2002/0067504 A1	Jun. 6, 2002

The rejections as presented by the Examiner are follows:

1. Claims 1-19 are rejected under 35 U.S.C § 103(a) as unpatentable over Krishan and Salgado.

2. Claim 20 is rejected under 35 U.S.C § 103(a) as unpatentable over Krishan, Salgado, and Beaverton.

OPINION

In a rejection under 35 U.S.C. § 103, the Examiner applies the teachings of Krishan and Salgado to demonstrate *prima facie* obviousness of the subject matter as a whole of instant claim 1. The Examiner finds, as set forth in the Answer, that Krishan shows the steps of claim 1 (*see, e.g.*, “Updating of Device Firmware” in columns 15 and 16 of Krishan), but does not expressly disclose that the software driver automatically updates the firmware program independently of a further software application for the portable card. The Examiner concludes that, in view of Salgado’s teachings, it would have been obvious to update the firmware program independently of a further software application for the portable card for the purpose of obviating or minimizing required user interaction.

Appellant submits that Salgado does not teach or suggest a method for a software driver to update a firmware program, being “specifically” directed to a method for updating a printer driver on a workstation. (Appeal Br. 7.) That Salgado does not describe updating a firmware program in a non-volatile memory of a portable card is not disputed, because Krishan is relied upon for that teaching. However, non-obviousness cannot be established by attacking references individually where the rejection is based upon the teachings of a combination of references. *In re Merck & Co.*, 800 F.2d 1091, 1097, 231 USPQ 375, 380 (Fed. Cir. 1986) (citing *In re Keller*, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981)).

Appellant goes further, however, in alleging that the functionality of drivers is “vastly different” from that of firmware. (Appeal Br. 8-10.) If the remarks are intended to represent an argument for patentability of claim 1, Appellant seems to answer the argument in the Reply Brief (at 4), in acknowledging that a printer driver and firmware are both software. Both references are directed to ensuring that a user has the latest version of software. Appellant submits (Reply Br. 4) that drivers and firmware are distinct in storage location and functionality. As we have indicated, however, Krishan discloses the claimed storage location. Claim 1 does not specify the functionality of the firmware program, but is directed to updating of the program to ensure possession of the latest version.

Moreover, in *KSR Int'l Co. v. Teleflex, Inc.*, 127 S. Ct. 1727, 1739, 82 USPQ2d 1385, 1395 (2007), the Supreme Court emphasized “the need for caution in granting a patent based on the combination of elements found in the prior art,” and discussed circumstances in which a patent might be determined to be obvious without an explicit application of the teaching, suggestion, motivation test.

In particular, the Supreme Court emphasized that “the principles laid down in *Graham* reaffirmed the ‘functional approach’ of *Hotchkiss*, 11 How. 248.” *KSR*, 127 S.Ct. at 1739, 82 USPQ2d at 1395 (citing *Graham v. John Deere Co.*, 383 U.S. 1, 12, 148 USPQ 459, 464 (1966) (emphasis added)), and reaffirmed principles based on its precedent that “[t]he combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.” *Id.* The Court explained:

When a work is available in one field of endeavor, design incentives and other market forces can prompt variations of it, either in the same field or a different one. If a person of ordinary skill can implement a predictable variation, §103 likely bars its patentability. For the same reason, if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill.

Id. at 1740, 82 USPQ2d at 1396. The operative question in this “functional approach” is thus “whether the improvement is more than the predictable use of prior art elements according to their established functions.” *Id.*

As if recognizing the weakness of the position set out in the Appeal Brief, Appellant adds a new argument in the Reply Brief (at 3-4). Appellant seems to argue that Salgado cannot suggest automatically updating the firmware program independently of a further software application for the portable card, because the reference does not describe automatically updating the printer driver “independently of a further software application.”

Appellant neglects to point out supporting disclosure in the Specification for the “wherein” clause of claim 1. (*See, e.g.*, Appeal Br. 2-3, “Summary of Claimed Subject Matter). The recitation “independently of a further software application for the portable card” appears, by its terms, to be met by a further software application for the portable card such as an application that uses the portable card to communicate with another device, perhaps days after the firmware update. The update is thus “independent” of a further software application for the portable card.

Appellant suggests that an “operating system” may be considered a “further application.” (*See Reply Br. 3-4.*) Operating system software, however, is normally considered distinct from “application” software; e.g., a WINDOWS operating system as opposed to a word processing application (WORD) that runs on the operating system.

In any event, Appellant alleges that in Salgado a further application would have to be executed to install a new printer driver, referring to paragraph 10 of the reference. (Reply Br. 3.) We do not find support for Appellant’s reading of paragraph 10. Salgado describes an embodiment where a separate upgrade or install program may upgrade and install the driver (e.g., ¶¶ 22, 28), but also describes the material embodiment where the automatic upgrade is performed by the driver itself (e.g., ¶¶ 22, 24). The reference expressly teaches that the driver can install the new version automatically, notifying the user only after the update is complete. Salgado ¶ 27; Fig. 4.

We have considered all of Appellant’s arguments in response to the rejection of claim 1, but find none of the arguments persuasive. Because Appellant relies on substantially similar limitations in independent claim 10, and relies on the same arguments in response to the rejection of claim 20, claims 2-20 fall with claim 1. *See 37 C.F.R. § 41.37(c)(1)(vii).* We thus sustain the rejection of each claim on appeal.

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CONCLUSION

The rejection of claims 1-20 under 35 U.S.C § 103(a) is affirmed.
No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a).

AFFIRMED

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