

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 35

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* TAKAYUKI NONAMI

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Appeal No. 1997-1925  
Application No. 08/465,315<sup>1</sup>

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ON BRIEF

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Before JERRY SMITH, FLEMING, 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 1-7, which are all of the claims pending in this application.

We REVERSE.

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<sup>1</sup> Application for patent filed June 5, 1995. According to appellant, this application is a continuation of serial number 08/272,635, filed Jul. 11, 1994, now abandoned which is a continuation of serial number 07/774,865, filed Oct. 11, 1991, now abandoned.

## **BACKGROUND**

The appellant's invention relates to a communication system signal processing apparatus with ROM stored signal procedures which are executed in RAM. The system transfers the data processing procedures for the digital signal processor (DSP) from ROM associated with the control processor to the DSP high speed RAM so as to reduce the size of the expensive high speed RAM. An understanding of the invention can be derived from a reading of exemplary claim 1, which is reproduced below.

1. A signal processing apparatus for processing digital communication signals according to selected procedures from among a plurality of stored signal processing procedures comprising:

a digital signal processor for executing signal processing of said digital communication signals according to selected procedures from among a plurality of signal procedures;

a random access memory (RAM) for storing a plurality of signal procedures for use in controlling the operation of said digital signal processor (DSP) for the processing of signals according to selected procedures from among said signal procedures stored in said RAM;

a read only memory (ROM) for storing the plurality of signal procedures which are to be transferred to said RAM for use in processing said digital communication signals in said digital signal processor and for use in controlling operations of a control processor (CPU); and

a control processor connected in interprocessor communication with said digital signal processor for reading from said ROM said plurality of stored signal procedures, including said stored signal procedures for use in controlling operations of said control processor, and for controlling said

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ROM and said RAM and all devices in the signal processing apparatus, and for transferring the signal procedures from the ROM to the RAM and enabling the operation of said digital signal processor according to the signal procedures transferred from said ROM and stored in said RAM.

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

Culley	5,109,521	Apr. 28, 1992
Haymond	5,148,153	Sep. 15, 1992
Nickel et al. (Nickel)	5,295,178	Mar. 15, 1994

Claims 1-7 stand rejected under 35 U.S.C. § 103 as being unpatentable over Nickel in view of Culley. Claims 1-7 stand rejected under 35 U.S.C. § 103 as being unpatentable over Haymond in view of Culley.

Rather than reiterate the conflicting viewpoints advanced by the examiner and the appellant regarding the above-noted rejections, we make reference to the examiner's answer (Paper No. 30 , mailed Dec. 26, 1996), the first supplemental examiner's answer (Paper No. 32, mailed Mar. 21, 1997) and the second supplemental examiner's answer (Paper No. 34, mailed Jul. 8, 1997) for the examiner's reasoning in support of the rejections, and to the appellant's brief (Paper No. 29, filed Sep. 30, 1996), reply brief (Paper No. 31, filed Jan. 15, 1997) and supplemental reply brief (Paper No. 33, filed May 21, 1997) for the appellant's arguments thereagainst.

## OPINION

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

### **Nickel and Culley**

As pointed out by our reviewing court, we must first determine the scope of the claim. "[T]he name of the game is the claim." **In re Hiniker Co.**, 150 F.3d 1362, 1369, 47 USPQ2d 1523, 1529 (Fed. Cir. 1998). We find that the examiner has not provided a teaching or convincing line of reasoning why one skilled in the art would have desired to "enabl[e] the operation of said digital signal processor according to the signal procedures transferred from said ROM and stored in said RAM" and to have the "control processor connected in interprocessor communication with said digital signal processor for reading from said ROM" as set forth in the language of claim 1.

"To reject claims in an application under section 103, an examiner must show an unrebutted *prima facie* case of obviousness. **See In re Deuel**, 51 F.3d 1552, 1557, 34 USPQ2d 1210, 1214 (Fed. Cir. 1995). In the absence of a proper *prima facie* case

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of obviousness, an applicant who complies with the other statutory requirements is entitled to a patent. **See In re Oetiker**, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). On appeal to the Board, an applicant can overcome a rejection by showing insufficient evidence of *prima facie* obviousness or by rebutting the *prima facie* case with evidence of secondary indicia of nonobviousness.” **In re Rouffet**, 149 F.3d 1350, 1355, 47 USPQ2d 1453, 1455 (Fed. Cir. 1998). Here, we find that appellants have overcome the *prima facie* case of obviousness by showing insufficient evidence by the examiner of nonobviousness. Therefore, we will not sustain the rejection of claim 1, nor its dependent claims 2-7.

Appellant argues that “there is nothing in Nickel which discloses the transfer of signal processing procedures from EPROM 120 to either the RAM 130 or the RAM 140 and the operation of the DSP based on signal procedures transferred from the EPROM to the RAM.” (See brief at page 5.) We agree with appellant. The examiner goes on at great length with citations to the Nickel reference to clarify the rejection. (See answer at pages 3-7.) The examiner relies upon the Nickel reference at column 11 relating to the transfer of operating parameters, etc. being transferred from the EPROM 500 to the internal RAM. This is similar to the teaching of Culley regarding the start-up

or booting procedures of the computer/processor. In Nickel, the EPROM and RAM, which the examiner relies upon, are both associated with the DSP. The ROM 500 is not ROM associated with the control processor as set forth in the language of claim 1. The language of claim 1 requires that the ROM contain both a plurality of DSP procedures and procedures for controlling the operation of the control processor. The ROM in Nickel is not disclosed as containing control procedures or that the DSP procedures are transferred from the ROM to the RAM by the control processor.

The examiner cites to column 8 of Nickel, but not the specific portion of text which states “[i]n addition, the controller microprocessor monitors the performance of the DSP processor and detects when the DSP processor fails. Similarly, the DSP processor can be reprogrammed, reset, and be given new operating parameters, i.e., personality characteristics specific to each radio installation and customer, by the controller microprocessor.” (Nickel at column 8, lines 29-36). This specific statement that the DSP can be “reprogrammed” by the controller microprocessor does not specifically identify how or where the reprogramming would be effectuated nor has the examiner provided a line of reasoning as to where and how the DSP would be reprogrammed. Nickel again references reprogramming at column 11, lines 48-51, and

states that “[t]he digital control board can write new program and other information into the EPROM. The control board receives the code from an external source, such as a remote terminal communicating over a telephone line.” Clearly, this reprogramming would be placed in the EPROM, rather than the RAM. Upon rebooting, some or all of the programming would be transferred to the RAM. Again, this transfer is from the EPROM of the DSP to the RAM of the DSP and not from the ROM of the controller processor to the RAM of the DSP.

Culley does not remedy this deficiency in Nickel since Culley merely is relied upon by the examiner to teach the basic booting process of the computer at power up when ROM programming is transferred to high speed RAM. Culley does not teach or suggest the transfer from the ROM to the RAM by the controller processor. The examiner relies upon this transfer as the motivation for “faster overall processing speed for a computer system” and “to obtain an efficient and faster processing system.” (See answer at page 6.) This line of reasoning similarly would not have motivated the skilled artisan to suggest the transfer from the ROM to the RAM by the controller processor to remedy the deficiency in each of the teachings of Nickel and Culley. Therefore, we will

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not sustain the rejection of claim 1 and its dependent claims 2-7 under 35 U.S.C. § 103 over Nickel and Culley.

### **Haymond and Culley**

The examiner relies upon Haymond to teach the controller processor and the DSP as with the Nickel reference as discussed above. (See brief at pages 8-9.) The examiner cites to columns 2-4 and figure 3 of Haymond. The examiner acknowledges that Haymond does not identify the memories or the transfer of processing instructions from one memory to the other. (See answer at page 9.) Appellant argues that the examiner's rejection is based upon "conjecture." (See brief at page 7.) We agree with appellant. Appellant argues that "two memories would have to be provided for controlling the operation of the DSP 42." (emphasis in original) in Haymond. **Id.** We have reviewed the portions of Haymond that the examiner referenced, and as appellant argues, we do not find any disclosure of the interaction between the two processors and the stored procedures to provide for controlling the operation of the DSP 42. We also agree with appellant that Haymond contains the same deficiency as discussed above with respect to Nickel. Therefore, we will not sustain the rejection of claims 1-7.

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**CONCLUSION**

To summarize, the decision of the examiner to reject claims 1-7 under 35 U.S.C. §  
103 is REVERSED.

REVERSED

JERRY SMITH	)	
Administrative Patent Judge	)	
	)	
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	)	
	)	BOARD OF PATENT
MICHAEL R. FLEMING	)	APPEALS
Administrative Patent Judge	)	AND
	)	INTERFERENCES
	)	
	)	
	)	
JOSEPH L. DIXON	)	
Administrative Patent Judge	)	

vsh

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