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opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.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. 28

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte MASAHIRO MURAKAMI

Appeal No. 95-3405
Application 08/077,505[1]

HEARD: May 4, 1998

Before KRASS, BARRETT and LEE, Administrative Patent Judges.

LEE, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134 from the examiner's final rejection of claims 1, 3 and 5-12. Claims 2 and 4 have been canceled. No claim has been allowed.

References relied on by the Examiner

Steeves et al. (Steeves)	5,075,874	Dec. 24, 1991
Nelson	5,025,398	Jun. 18, 1991

[1] Application for patent filed June 17, 1993. According to appellant, this application is a continuation of application 07/794,047, filed November 19, 1991.

Christopher et al. (Christopher) GB 2 220 286 Jan. 04, 1990 (British Patent)

The Rejections on Appeal

1. Claims 1, 3, 5-8 and 10-12 stand finally rejected under 35 U.S.C. § 102(e) as being anticipated by Steeves.

2. Claims 1, 3, 5-8 and 10-12 stand finally rejected under 35 U.S.C. § 102(a) as being anticipated by Nelson and Christopher et al. (Answer at 3). In the discussion of this rejection, the examiner did not refer to any combination of teachings from Nelson and Christopher but applied, instead, Nelson and Christopher individually, which is correct because in an anticipation rejection all of the claimed elements must be found within a single reference. It appears that a mistake was made only in the identification of the rejection.

Accordingly, we will treat the anticipation rejection based on Nelson and Christopher as if it were based on Nelson or Christopher, in the alternative.

When a rejection is based on either reference A or reference B, it is improper to identify the rejection as being based on "A and B." Such a mistake tends to confuse both the appellants and the Board and should not be repeated in the future.

3. Claims 1, 3, and 5-12 stand finally rejected under 35 U.S.C. § 103 as being unpatentable over Steeves, Nelson, and

Christopher. In the discussion of this rejection, the examiner did not refer to any combination of teachings from Steeves, Nelson and Christopher but appears to have applied, instead, Steeves, Nelson and Christopher individually.

Accordingly, we will treat the obviousness rejection based on Steeves, Nelson and Christopher as if it were based on Steeves, Nelson **or** Christopher, in the alternative. The examiner should take note that misidentifying the rejection causes problems both for the appellant and the Board and more care should be applied in stating the ground of rejection.

The Invention

The invention is directed to a printer for use with an inputted emulation program which interprets the control code sent from a host computer. The emulation program is stored in a back up memory means so that it is not erased when the printer is turned off. Claims 1, 11 and 12 are the only independent claims. All other claims depend ultimately from claim 1. Representative claim 1 is reproduced below:

> 1. A printer for receiving a control code and print data from a host computer and for controlling a printing unit according to the received control code to carry out printing based on the print data, comprising:
>
> input means for inputting an emulation program used for interpreting the control code;

> first storage means for storing the emulation program that has been inputted to said input means, said first storage means comprising back up memory means for backing up the first storage means so as not to erase the stored emulation program when the printer is powered off;
>
> control means for controlling said input means, said first storage means and said back up memory means so that the emulation program inputted to said input means is installed in said first storage means; and
>
> second storage means for storing a preselected emulation program, wherein the emulation program stored in said first storage means and the preselected emulation program stored in said second storage means are selectively used in accordance with an identification code added to the control code received from the host computer.

Opinion

We do not sustain the rejection of claims 1, 3, 5-8 and 10-12 as being anticipated by or obvious in view of Steeves.

We do not sustain the rejection of claims 1, 3, 5-8 and 10-12 as being anticipated by or obvious in view of Christopher.

We sustain the rejection of claims 1, 3, 5-8 and 10-12 as being anticipated by Nelson.

We sustain the rejection of claims 1, 3, 5-12 as being obvious in view of Nelson.

Our opinion is based only on the arguments presented by the appellants in their briefs. Arguments not raised in the briefs are not before us, are not at issue, and are considered waived.

The rejections based on Steeves

The rejections based on Christopher

Anticipation is established only when a single prior art reference discloses, either expressly or under the principles of inherency, each and every element of the claimed invention. In re Spada, 911 F.2d 705, 708, 15 USPQ2d 1655, 1657 (Fed. Cir. 1990); RCA Corp. v. Applied Digital Data Sys., Inc., 730 F.2d 1440, 1444, 221 USPQ 385, 388 (Fed.Cir. 1984).

Each of independent claims 1, 11, and 12 requires that an emulation program received through an input means is stored in a backup memory means such that it will not be erased when the printer is turned off. An emulation program is not just any stored data or instructions. According to the specification, an emulation program is defined as follows (spec. at 1):

> There is known that a so-called emulation program exists for reading the control codes that are established for a certain printer and converting the control codes into differently grouped control codes established for another printer.

An emulation program gives a printer the flexibility of being capable of responding to control signals from the host computer which are intended for a different printer.

The appellant is correct that the examiner erroneously

regarded Steeves' configuration data downloaded from the host computer as the emulation program required by the claims. As is correctly described by the appellant, Steeves discloses a communication interface for a computer output printer. The interface includes several input ports which can be "configured" to emulate different manufacturer's printers. In Steeves, configuration data is stored in EEPROM 74 and is not erased when the printer is turned off (column 3, lines 49-60), but the configuration data merely defines which emulation program is assigned to or used for which input port (column 4, lines 37-42) and is not itself the emulation program. The emulation programs or modules are not disclosed as being downloaded or inputted from the host computer, nor are they disclosed as being stored in the disk drive. There is no basis for the examiner's incorrect finding that in Nelson the emulation mode data must include emulation program data.

Further as to claims 1, 3 and 5-10, the examiner has failed to point out where Steeves discloses the addition of an identification code to the control code received from the host computer. The string described in column 5, lines 36-40 of Steeves is merely a command to switch the printer from emulation mode to printer control mode. It is not any identification code

added to the control code received from the host computer, in response to which certain acts occur as is defined in claim 1.

For the foregoing reasons, we do not sustain the rejection of claims 1, 3, and 5-10 as being anticipated by Steeves.

With regard to Christopher, the examiner states that in Christopher, selected portions of EPROM memories 202 and 206 are reconfigured by software alone, and that the reconfiguration includes emulation program data "such as on-line downloading of data, language, enabling formats and configuring formats" (answer at 5-6). We agree with the appellant, however, that none of these items referred to by the examiner equates to the appellant's claimed emulation program. The examiner has provided no explanation as to why any of the above-referenced items can reasonably be regarded as an emulation program in the appellant's claimed invention. The following points of the appellant remain unanswered (Reply at 3):

> Online downloading of data relates to downloading data from a host computer and is unrelated to interpreting control codes in the data. Similarly, enabling formats and configuring formats relates to the interaction of the hardware and its compatibility with the data, similar to the configuration data of Steeves, discussed above. These operations are also unrelated to an

emulation program for interpreting control codes as claimed.

For the foregoing reasons, we do not sustain the rejection of claims 1, 3, 5-8 and 10-12 as being anticipated by Christopher.

As for the obviousness rejection of claims 1, 3, and 5-12, the examiner discussed only claim 9 and failed to address anything concerning claims 1, 3, 5-8 and 10-12 (answer at 4). It appears that the obviousness rejection of claims 1, 3, 5-8 and 10-12 is based solely on the anticipation rejection of those claims over the same prior art reference. Anticipation has been referred to as the ultimate or epitome of obviousness. In re Fracalossi, 681 F.2d 792, 794, 215 USPQ 569, 571 (CCPA 1982).

Accordingly, because we have not sustained the anticipation rejection of claims 1, 3, 5-8 and 10-12 over Steeves, or over Christopher, we do not sustain the obviousness rejection of those claims over Steeves, or over Christopher, on the mere basis of the corresponding anticipation rejection of the same claims.

As for claim 9, the examiner's discussion does not account for the deficiencies of the references with respect to the features of claim 1 from which claim 9 depends. Accordingly, the

rejection of claim 9 as being unpatentable over Steeves, or over Christopher, cannot be sustained.

The rejections based on Nelson

Claims 1, 3, 5-8 and 10-12 stand rejected as being anticipated by Nelson. The appellant argues that Nelson nowhere discloses a back-up memory means which stores an inputted emulation program such that it would not be erased when the printer is turned off. The examiner, on the other hand, takes the position that the character set definitions downloaded from the host computer constitute just such an emulation program.

Nelson's invention is directed to making an all points addressable and nonimpact printer compatible with a host computer which sends characters to be printed on a line printer. There most certainly is an emulation program in Nelson. Note that Nelson's Abstract concludes with this description: "The conversion apparatus emulates the operation of a high speed line printer to the host processor while simultaneously emulating a nonimpact printer programmed host processor to the nonimpact printer." In column 3, lines 35-42 of Nelson, it is stated:

> As the host processor transmits print control information on a line by line basis, the conversion apparatus in transparent fashion uses the retrieved character set definition information to convert the character identification and location data produced by the host processor into the control signals required by the all points addressable printer to print the

> corresponding character on the print media on a page basis.

Thus, based on the stored character set definition, control signals for line printers are converted into control signals used to operate an all points addressable printer. This makes the character set definitions an emulation program within the context of the appellant's claims. Additionally, the character set definitions are created in the host computer and then downloaded to the printer. Therefore, the character set definitions as an emulation program is an inputted emulation program. See Nelson at column 4, lines 39-49.

The downloaded program is stored in a disk drive memory 114 which holds its contents even after the printer is turned off (Column 4, lines 45-49). Nelson also discloses an interface control means which implements a diagnostic write channel command to transfer information from the host computer to the disk drive memory 114 associated with the printer (Column 5, lines 33-50). It is implicit that the interface determines whether the incoming information is the character set definition or other data to be stored on the disk drive before sending it to the disk drive. See, for example, Nelson in column 4, lines 45-49. The claims do not require that the emulation program is the only item stored on

the disk drive.

The claims are not so specific as to be limited to an emulation of one printer by another printer of the same general type, e.g., both being all points addressable nonimpact printers, or both being line printers. Nelson's conversion of control signals for line printers into control signals for all points addressable nonimpact printers is sufficient to meet the claimed emulation.

The appellant further argues that the claim features are written in means-plus-function format under 35 U.S.C. § 112, sixth paragraph, and that Nelson lacks any structure which is equivalent to the structures disclosed in the appellant's specification (Br. at 11-13). The argument, however, is not supported by any specific comparison of structures except in connection with the backup storage means. Accordingly, we need to examine equivalence only with respect to that means.

The appellant argues (Br. at 13):

> For example, a person of ordinary skill in the art would not have recognized the interchangeability of RAM 32 and back-up memory 33 for backing up the RAM so as not to erase a stored emulation program when the printer is turned off with a ROM or EEPROM, as these "read only" devices are difficult to replace and require more time to access, whereas a RAM is easily

accessed and modified.

The problem with the appellant's argument is threefold. First, the backup memory of Nelson as found by the examiner is neither a ROM nor an EEPROM, but the disk drive memory unit 114. Secondly, the appellant's backup memory is not RAM unit 32 but backup memory unit 33. Third, the structure of the appellant's backup memory unit 33 is not necessarily a RAM, based on written described in the specification.

As is illustrated in the appellant's Figure 1, the structure of backup memory unit 33 is not specified. In the specification, it is described that "[t]he memory unit 33 may be electrically backed up by a battery or may be a non-volatile memory into which data can electrically be written" (spec. at 4, lines 14-16). Thus, according to the appellant's own specification, backup memory unit 33 can take on many different structures so long as the information stored therein is not lost when the printer is turned off. Consequently, the scope of the appellant's backup memory means is quite broad and literally covers Nelson's disk drive unit 114. For this reasons, the appellant's non-equivalence argument is misplaced and without merit.

At oral hearing, appellant's counsel pointed out that even assuming that in Nelson the character set definitions downloaded from the host computer constitute an emulation program inputted

to the printer through downloading, the inputted emulation program is not additional to a preselected emulation program already stored in a second storage means within the printer. It is noted that each of the independent claims recites a second storage means for storing a preselected emulation program and requires that the preselected emulation program and the inputted emulation program are selectively used. We agree with the appellant that this feature appears not to be disclosed by Nelson and the examiner has not addressed what constitutes this pre-selected emulation program in a second storage means with respect to which the inputted emulation program is additional. Evidently, as is argued by the appellant's counsel at the oral hearing, there is only one emulation in Nelson, which converts from codes for a line printer to codes for an all points addressable nonimpact printer. Accordingly, we do not sustain the rejection of claims 1, 3, 5-8 and 10-12 as being anticipated by Nelson.

Claims 1, 3, 5-8 and 10-12 also stand rejected under 35 U.S.C. § 103 as being unpatentable over Nelson. However, the examiner provided no explanation beyond those supporting the anticipation rejection of the same claims over Nelson. Since no reason has been set forth by the examiner as to why it would have been obvious to one with ordinary skill in the art to have a

preselected emulation program as well as an inputted additional emulation program which are selectively used and wherein the inputted additional emulation program is put in a back-up memory which holds its contents after the printer is turned off, we do not sustain the obviousness rejection of claims 1, 3, 5-8, and 10-12 over Nelson.

Claim 9 stands rejected as being obvious over Nelson. Claim 9 depends from claim 1. Because we have not sustained the obviousness rejection of claim 1 over Nelson, we also do not sustain the obviousness rejection of claim 9 over Nelson.

Conclusion

The anticipation rejection of claims 1, 3, 5-8 and 10-12 under 35 U.S.C. § 102 over Steeves is reversed.

The anticipation rejection of claims 1, 3, 5-8 and 10-12 under 35 U.S.C. § 102 over Christopher is reversed.

The anticipation rejection of claims 1, 3, 5-8 and 10-12 under 35 U.S.C. § 102 over Nelson is reversed.

The obviousness rejection of claims 1, 3 and 5-12 under 35 U.S.C. § 103 over Steeves is reversed.

The obviousness rejection of claims 1, 3 and 5-12 under 35 U.S.C. § 103 over Christopher is reversed.

The obviousness rejection of claims 1, 3, and 5-12 under 35

U.S.C. § 103 over Nelson is reversed.

REVERSED

ERROL A. KRASS Administrative Patent Judge	)
LEE E. BARRETT Administrative Patent Judge	) BOARD OF PATENT) APPEALS AND) INTERFERENCES
JAMESON LEE Administrative Patent Judge	)

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