

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. 24

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte WAYNE A. MCLAREN, JOSEPH C. POLIMENI,
and FRANK J. SCHROEDER

Appeal No. 1999-1193
Application No. 08/429,504

ON BRIEF

Before HAIRSTON, LALL, and DIXON, Administrative Patent Judges.

LALL, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134 from

the Examiner's final rejection¹ of claims 2 to 12 and 18 to 28.

Claims 1, 13 to 17 and 29 to 32 have been canceled.

The disclosed invention is directed to an improved method and system for saving the operating state of a data processing system to a nonvolatile storage such that the operating state may be rapidly restored, for example, in response to restoration of power to the data processing system.

Figure 2 of the specification depicts an illustrative embodiment of the data processing system with which the method and system of the present invention may be utilized. In response to a selected input, a determination is made whether

¹ First amendment after the final rejection (paper no. 14) was not approved for entry by the Examiner, see paper no. 15. Second amendment after final (paper no. 16) was approved for entry by the Examiner, see paper no. 17. We also note that the statement for the grounds of rejection in the final rejection is different from the statement of ground of rejection in the Examiner's answer. However, we note that the statement of rejection in the Examiner's answer on page 3 is consistent with the issues outlined by appellants at page 6 of the brief, except for the oversight by the Examiner of the inclusion of claims 18 to 22 in the statement of rejection under U.S.C. § 103. Since appellants have argued the rejection of the claims as presented in the Examiner's answer, we consider that the issues outlined in the brief at page 6 are before us for appeal.

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storing the operating state of the data processing system is feasible. If the storing of the operating state is feasible, scheduling of tasks to be performed by the data processing system is halted. Data not required for operation of the data processing system is then removed from the volatile memory. The operating state of the data processing system is stored within the nonvolatile mass storage device, thereby enabling the operating state of the data processing system to be efficiently restored. Thereafter, power is removed from the data processing system. In response to restoring power to the data processing system, a determination is made whether the operating state of the data processing system is stored within the nonvolatile mass storage device. In response to a determination that the operating state of the data processing system is stored within the nonvolatile mass storage device, the operating state of the data processing system is loaded from the nonvolatile mass storage device, thereby restoring the operating state of the data processing system. Further illustration of the invention can be obtained by the following claim.

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§ 102, while claims 2 to 6, 9 to 12, 18 to 22 and 25 to 28 stand rejected under 35 U.S.C. § 103.

Rather than repeat verbatim the arguments of Appellants and the Examiner, we make reference to the briefs² and the answer for their respective positions.

OPINION

We have considered the rejections advanced by the Examiner and the supporting arguments. We have, likewise, reviewed the Appellants' arguments set forth in the brief.

We affirm-in-part.

At the outset, we note that Appellants have elected claims 2 to 6, 9 to 12, 18 to 22, and 25 to 28 as a first group, and claims 7 to 8 and 23 to 24 as a second group. Brief at page 6.

We consider the two groups seriatim.

² A reply brief was filed as paper no. 21 and was noted by the Examiner without any further response, see paper no. 22.

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Claims 2 to 6, 9 to 12, 18 to 22, and 25 to 28

The Examiner rejects these claims under 35 U.S.C. § 103 as obvious over Crump.

In our analysis, we are guided by the general proposition that in an appeal involving a rejection under 35 U.S.C. § 103, an examiner is under a burden to make out a prima facie case of obviousness. If that burden is met, the burden of going forward then shifts to the applicant to overcome the prima facie case with argument and/or evidence. Obviousness, is then determined on the basis of the evidence as a whole and the relative persuasiveness of the arguments. See In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992); In re Hedges, 783 F.2d 1038, 1039, 228 USPQ 685, 686 (Fed. Cir. 1986); In re Piasecki, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984); and In re Rinehart, 531 F.2d 1048, 1052, 189 USPQ 143, 147 (CCPA 1976). We are further guided by the precedent of our reviewing court that the limitations from the disclosure are not to be imported into the claims. In re Lundberg, 244 F.2d 543, 113 USPQ 530 (CCPA 1957); In re Queener, 796 F.2d 461, 230 USPQ 438 (Fed. Cir. 1986). We also note that arguments not made separately for

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any individual claim or claims are considered waived. See 37 CFR § 1.192(a) and (c). In re Baxter Travenol Labs., 952 F.2d 388, 391, 21 USPQ2d 1281, 1285 (Fed. Cir. 1991) ("It is not the function of this court to examine the claims in greater detail than argued by an appellant, looking for nonobviousness distinctions over the prior art."); In re Wiechert, 370 F.2d 927, 936, 152 USPQ 247, 254 (CCPA 1967)("This court has uniformly followed the sound rule that an issue raised below which is not argued in that court, even if it has been properly brought here by reason of appeal is regarded as abandoned and will not be considered. It is our function as a court to decide disputed issues, not to create them.").

We take claim 2 as representative of this group. The Examiner explains his position at pages 3 to 4 of the Examiner's answer and concludes that, id. at 4, that "[i]t would have been obvious ... to create a file only when data to be stored in it is ready in order to avoid unnecessary file creations and deletions." Appellants argue, brief at page 7, that "[t]he Examiner's bare assertion of obviousness provides an

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insufficient basis for a finding of obviousness" The Appellants' position is that, in Crump, suspend file 294 already exists whereas in the claimed invention a suspend file is created only when a determination is made that the storage of the operating state of the processing system is possible. The Examiner's response, answer page 7, is that "[i]f data is never written to a file the creation of the file would be superfluous. In particular, if there is additional processing such as locating contiguous blocks associated with it creating such a file would be the cause of verhead [sic, overhead]. The deletion of the file would also be the cause of unnecessary overhead when the system is being shut-down. As mentioned above, Crump teaches that suspend file may be allocated at other times (col. 46, lines 51-54)."

It has been settled that while there must be some teaching, reason, suggestion, or motivation to combine existing elements to produce the claimed device, it is not necessary that the cited references or prior art specifically suggest making the combination (see B.F. Goodrich Co. v. Aircraft Braking Sys.

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Corp., 72 F.3d 1577, 1583, 37 USPQ2d 1314, 1319 (Fed. Cir. 1996) and In re Nilssen, 851 F.2d 1401, 1403, 7 USPQ2d 1500, 1502 (Fed. Cir. 2988)) as the Appellant would apparently have us believe. Rather, the test for obviousness is what the combined teachings of the references would have suggested to one of ordinary skill in the art. See In re Young, 927 F.2d 588, 591, 18 USPQ2d 1089, 1091 (Fed. Cir. 1991) and In re Keller, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981). Moreover, in evaluating such references it is proper to take into account not only the specific teachings of the references but also the inferences which one skilled in the art would reasonably be expected to draw therefore. In re Preda, 401 F.2d 825, 826, 159 USPQ 342, 344 (CPA 1968).

In this case we agree with the Examiner that it would have been prudent for an artisan to avoid the creation of superfluous files, and desirable to create the suspend file as needed because it would save the storage space and the processing resources, rather than to have such a file available and occupying the storage area at all times. Also, Crump discloses, as the Examiner has stated, that "[r]egardless of when the suspend file is allocated, the file

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should be contiguous sectors to allow a rapid write to disk and a rapid read from disk during suspends and resumes, respectively." (col. 46, lines 51-54). This implies that Crump does not have a fixed location for the suspend file but rather makes it responsive to the need of the suspend routine. Thus, we find that it would have been obvious for an artisan to create the suspend file only when it was desirable to have it available for the storage of the operating state of the data processing system. Therefore, we sustain the obviousness rejection of claim 2 and its grouped claims 3 to 6, 9 to 12, 18 to 22, and 25 to 28 over Crump.

Claims 7 to 8 and 23 to 24

The Examiner rejects these claims as being anticipated by Crump. We take claim 7 as representative of this group.

A prior art reference anticipates the subject of a claim when the reference discloses every feature of the claimed invention, either explicitly or inherently, See Hazani v. Int'l Trade Comm'n, 126 F.3d 1473, 1477, 44 USPQ2d 1358, 1361 (Fed. Cir. 1997) and RCA Corp. v. Applied Digital Data Sys., Inc., 730 F.2d 1440, 1444, 221 USPQ 385, 388 (Fed. Cir. 1984).

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The Examiner asserts, pages 4 and 5 of the Examiner's answer, that Crump at col. 53 to 54; col. 39, lines 17-20; and col. 39, lines 10-11 shows the various claimed steps of claim 7. In particular, the Examiner asserts, answer at page 4, that the recited step of **"discarding each memory page within said subset of said plurality of memory pages for which a copy is stored within said nonvolatile mass storage device or which contains no data (flushing caches, col. 39, lines 17-20) [of Crump]."** Appellants argue that, brief at page 8, the flushing of caches means the "invalidation of the entire contents of Crump's caches. In contrast to the flushing of caches as taught by Crump, the removing step recited in claim 7 entails discarding certain memory pages ... and storing memory pages containing nonessential data within nonvolatile storage Crump certainly does not identically disclose, and further, fails to show or suggest handling different memory pages differently depending upon content." The Examiner's response, answer page 8, is that "the claims use the word 'comprising' which would include any other data being discarded along with the pages already stored in nonvolatile storage and storing

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any other data along with nonessential data." We disagree with Examiner's interpretation of the claim. Instead, we are persuaded by Appellants that the flushing of cache in Crump is not dependent on any specific condition of the cache, and Crump does not disclose or suggest the handling of different pages of cache differently depending upon the content of each page. Therefore, we do not sustain the anticipation rejection of claim 7 and dependent claim 8 by Crump. Since claim 23 has a similar limitation we also do not sustain the rejection of claim 23 and its dependent claim 24 as being anticipated by Crump.

In summary, we have sustained the rejection of claims 2 to 6, 9 to 12, 18 to 22, and 25 to 28 under 35 U.S.C. § 103, while we have not sustained the rejection of claims 7 to 8 and 23 to 24 under 35 U.S.C. § 102.

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

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