

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.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. 15

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte KEVIN J. SMITH and K. SRIDHARAN

Appeal No. 1997-2658
Application No. 08/478,974

ON BRIEF

Before MARTIN, BARRETT, and RUGGIERO, Administrative Patent Judges.

RUGGIERO, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on the appeal from the final rejection of claims 1-41, all of the claims pending in the present application.

Appeal No. 1997-2658
Application No. 08/478,974

The claimed invention relates to a program tuning adviser in which code samples are analyzed and critical regions of program code are identified. More particularly, Appellants indicate at pages 3 and 4 of the specification that the tuning advisor suggests improvements to the source code related to the displayed graphical views of the identified critical program code regions.

Claim 1 is illustrative of the invention and reads as follows:

1. In a computer system including a central processing unit (CPU) and a number of program modules running on said CPU, a method comprising steps of:

- (A) collecting code samples from one of said modules;
- (B) analyzing said samples to identify critical regions in said code samples;
- (C) displaying a first graphical view of said critical regions;
- (D) displaying source code related to a particular one critical region selected by a user from said first graphical view of said critical regions resulting in displayed source code;
- (E) running a performance tuning advisor on a code portion selected by a user from said displayed source code, said performance tuning advisor providing optimization advice related to said code portion; and,

Appeal No. 1997-2658
Application No. 08/478,974

(F) displaying said optimization device for said section of code.

The Examiner relies on the following prior art:

Van Dyke et al. (Van Dyke) 1992	5,175,856	Dec. 29,
Spix et al. (Spix) 1993	5,179,702	Jan. 12,
O'Hair 1993	5,187,789	Feb. 16,

Claims 1-41 stand finally rejected under 35 U.S.C. § 103. As evidence of obviousness, the Examiner offers O'Hair in view of Spix with respect to claims 1-3, 5, 7, 9, 10, 12, 14-16, 18-22, 24, 26, 28, 29, 31, 33, and 35-41, and adding Van Dyke to the basic combination with respect to claims 4, 6, 8, 11, 13, 17, 23, 25, 27, 30, 32, and 34.¹

¹ At page 1 of the Reply Brief, Appellants call attention to the misspelling of "critical" at line 5 of claim 39. We also point out that "critical" is misspelled at claim 40, line 3 and claim 41, lines 5 and 7.

Appeal No. 1997-2658
Application No. 08/478,974

Rather than reiterate the arguments of Appellants and the Examiner, reference is made to the Briefs² and Answer for the respective details thereof.

OPINION

We have carefully considered the subject matter on appeal, the rejection advanced by the Examiner and the evidence of obviousness relied upon by the Examiner as support for the rejection. We have, likewise, reviewed and taken into consideration in reaching our decision, Appellants' arguments set forth in the Briefs along with the Examiner's rationale in support of the rejection and arguments in rebuttal set forth in the Examiner's Answer.

It is our view, after consideration of the record before us, that the evidence relied upon and the level of skill in the particular art would not have suggested to one of ordinary skill in the art the obviousness of the invention as set forth in claims 2-21 and 34-41. We reach the opposite conclusion

² The Appeal Brief was filed January 6, 1997. In response to the Examiner's Answer dated February 19, 1997 a Reply Brief was filed April 24, 1997, which was entered by the Examiner without further comment in the letter dated April 21, 1998.

Appeal No. 1997-2658
Application No. 08/478,974

with respect to claims 1 and 22-33. Accordingly, we affirm-in-part.

In the "Grouping of Claims" section of the Brief, Appellants list each of the appealed independent claims 1, 2, 15, 16, 39, and 41. Consistent with this listing, Appellants have separately argued the patentability of each of the independent claims. We will consider the claims separately only to the extent that separate arguments are of record in this appeal. No separate arguments have been provided for any of the dependent claims 3-14, 17-38, and 40 and, accordingly, these claims will stand or fall with their base claim. Note In re King, 801 F.2d 1324, 1325, 231 USPQ 136, 137 (Fed. Cir. 1986); In re Sernaker, 702 F.2d 989, 991, 217 USPQ 1, 3 (Fed. Cir. 1983). In addition, any arguments which Appellants could have made but elected not to make in the Briefs have not been considered in this decision (note 37 CFR § 1.192).

In rejecting claims under 35 U.S.C. § 103, it is incumbent upon the Examiner to establish a factual basis to support the legal conclusion of obviousness. See In re Fine, 837 F.2d 1071, 1073, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). In so

Appeal No. 1997-2658
Application No. 08/478,974

doing, the Examiner is expected to make the factual determinations set forth in Graham v. John Deere Co., 383 U.S. 1, 17-18, 148 USPQ 459, 467 (1966), and to provide a reason why one having ordinary skill in the pertinent art would have been led to modify the prior art or to combine prior art references to arrive at the claimed invention. Such reason must stem from some teaching, suggestion or implication in the prior art as a whole or knowledge generally available to one having ordinary skill in the art. Uniroyal Inc. v. Rudkin-Wiley Corp., 837 F.2d 1044, 1051, 5 USPQ2d 1434, 1438 (Fed. Cir.), cert. denied, 488 U.S. 825 (1988); Ashland Oil, Inc. v. Delta Resins & Refractories, Inc., 776 F.2d 281, 293, 227 USPQ 657, 664 (Fed. Cir. 1985), cert. denied, 475 U.S. 1017 (1986); ACS Hospital Systems, Inc. v.

Appeal No. 1997-2658
Application No. 08/478,974

Montefiore Hospital, 732 F.2d 1572, 1577, 221 USPQ 929, 933

(Fed.

Cir. 1984). These showings by the Examiner are an essential part

of complying with the burden of presenting a prima facie case of

obviousness. Note In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d

1443, 1444 (Fed. Cir. 1992).

With respect to independent claims 2, 15, 16, 39, and 41, the Examiner, as the basis for the obviousness rejection, proposes (Answer, page 4) to modify the system of O'Hair by relying on Spix to supply the missing teaching of utilizing a program tuning advisor to provide optimization advice to a user of the system. In the Examiner's view, the skilled artisan, in attempting to address source code bug problems in O'Hair, would have found it obvious to utilize the interactive visual display features of Spix's tuning advisor.

In response, Appellants' arguments against the Examiner's establishment of a prima facie case of obviousness center on the alleged failure of the disclosure of the claimed feature

Appeal No. 1997-2658
Application No. 08/478,974

of identification of critical regions of program code through program execution by O'Hair, the primary reference relied on by the Examiner for this feature. After reviewing the O'Hair reference in light of the arguments of record, we are in agreement with Appellants' interpretation of the operation of O'Hair. As asserted by Appellants (Brief, pages 6 and 7), particular program regions to be displayed and examined in O'Hair are selected by a user. Notwithstanding the differing interpretations of the term "critical" by Appellants and the Examiner, we find no disclosure of the identification of regions to be displayed, "critical" or otherwise, in O'Hair, or in Spix, by execution of a program.

We have also reviewed the disclosure of Van Dyke which was applied to the combination of O'Hair and Spix to address the data type optimization features of several of the dependent claims. We find nothing in the disclosure of Van Dyke which would overcome the innate deficiencies of O'Hair and Spix.

We note that the feature of identifying critical regions through program execution discussed supra is present, although in different forms, in each of appealed independent claims 2,

Appeal No. 1997-2658
Application No. 08/478,974

5, 16, 39, and 41. Claim 2 recites "running an application which includes application code modules" and "analyzing said application code modules to identify critical regions." Each of independent claims 15 and 16 recites "analyzing a program with a performance analysis tool to identify critical regions" which we interpret in the claimed context as being a run-time analysis. Similarly, independent claims 39 and 41 each recite the computer implemented steps of "executing computer executable code" and "identifying a critical region of said computer executable code." In view of the above discussion, it is our opinion that, since all of the claim limitations are not taught or suggested by the applied prior art, the Examiner has not established a prima facie case of obviousness. Accordingly, the 35 U.S.C. § 103 rejection of independent claims 2, 15, 16, 39, and 41, as well as claims 3-14, 17-21, 34-38, and 40 dependent thereon, is not sustained.

We next turn to a consideration of independent claim 1 and note that, while we found that the Examiner had failed to establish a prima facie case of obviousness with respect to independent claims 2, 15, 16, 39, and 41, we reach the opposite conclusion with respect to independent claim 1. The

Appeal No. 1997-2658
Application No. 08/478,974

burden is, therefore, upon Appellants to come forward with evidence or arguments which persuasively rebut the Examiner's prima facie case of obviousness.

After reviewing Appellants' arguments in response, we remain convinced of the Examiner's position as stated in the Answer. We note that claim 1, contrary to the other appealed independent claims, is not limited to identification of program regions by program execution. Rather, claim 1 recites "collecting code samples" and "analyzing said samples to identify critical regions." In our view, the disclosure of O'Hair would meet these limitations as well as the claimed display of graphical views of critical regions and related source code (O'Hair, Figures 3 and 4a). The connections contained in the intermediate representations of O'Hair are used to collect program samples and the user can perform analysis to identify portions in need of debugging (O'Hair, column 5, lines 46-54).

We also find Appellants' assertion of error in the Examiner's interpretation of the term "critical regions" to be unpersuasive. We agree with the Examiner (Answer, page 14) that, barring any limiting defining claim language, the

Appeal No. 1997-2658
Application No. 08/478,974

terminology "critical regions" can be broadly interpreted to include any portion of a program which would cause incorrect execution of a computer program.

With respect to the proposed combination of O'Hair and Spix, Appellants assert (Brief, page 16) that the Examiner has not established motivation for combining the references. We disagree. The Examiner's statement of the grounds of rejection at page 4 of the Answer provides clear motivation for combining O'Hair and Spix. As asserted by the Examiner, the skilled artisan, using the program debugger of O'Hair would clearly be aided by the use of the interactive visual display features of the program tuner of Spix.

As to Appellants' assertion (Brief, page 18) that Spix has no disclosure of the identification of "critical regions," we point out that Spix is used in combination with O'Hair to address the claim limitations. One cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. In re Keller, 642 F. 2d 413, 208 USPQ 871 (CCPA 1981); In re Merck & Co., Inc., 800 F. 2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

For all of the above reasons, it is our view that

Appeal No. 1997-2658
Application No. 08/478,974

the Examiner has established a prima facie case of obviousness with respect to independent claim 1 which remains un rebutted by any convincing arguments offered by Appellants.

Accordingly, the rejection of claim 1 under 35 U.S.C. § 103 is sustained. Since, as noted above, no separate arguments have been made with regard to any of the dependent claims, claims 22-33 fall with claim 1 in accordance with 37 CFR § 1.192(c)(7). Thus, it follows that the decision of the Examiner to reject claims 22-33 under 35 U.S.C. § 103 is also sustained.

In summary, we have sustained the 35 U.S.C. § 103 rejection of claims 1 and 22-33, but have not sustained the 35 U.S.C. § 103 rejection of claims 2-21 and 34-41. Therefore, the Examiner's decision rejecting claims 1-41 is affirmed-in-part.

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

Appeal No. 1997-2658
Application No. 08/478,974

JOHN C. MARTIN)	
Administrative Patent Judge)	
)	
)	
)	
)	BOARD OF PATENT
LEE E. BARRETT)	APPEALS
Administrative Patent Judge)	AND
)	INTERFERENCES
)	
)	
)	
JOSEPH F. RUGGIERO)	
Administrative Patent Judge)	

lp

Appeal No. 1997-2658
Application No. 08/478,974

OWEN L LAMB
PO BOX 240
SANTA BARBARA CA 93102-0240

Leticia

Appeal No. 1997-2658
Application No. 08/478,974

APJ RUGGIERO

APJ BARRETT

APJ MARTIN

DECISION: AFFIRMED IN PART
Send Reference(s): Yes No
or Translation (s)
Panel Change: Yes No
Index Sheet-2901 Rejection(s):
Prepared: December 17, 2001

Draft Final

3 MEM. CONF. Y N

OB/HD GAU

PALM / ACTS 2 / BOOK
DISK (FOIA) / REPORT