

367 F.3d 1359  
United States Court of Appeals,  
Federal Circuit.

In re AMERICAN ACADEMY  
OF SCIENCE TECH CENTER.

No. 03–1531. | May 13, 2004.

### Synopsis

**Background:** Owner of patent requiring a plurality of “general purpose user computers” that were connected to a “data center computer” appealed from a United States Patent and Trademark Office, Board of Patent Appeals and Interferences decision, 2003 WL 23014570, which upheld a patent examiner's rejection, in reexamination, of several patent claims as anticipated.

**Holdings:** The Court of Appeals, Bryson, Circuit Judge, held that:

[1] term “user computer,” as used in patent claim describing a method of operating a distributed data processing system including a plurality of independent, not necessarily uniform, general purpose user computers to run respective user application programs, properly encompassed the mainframes and minicomputers of the cited prior art, and

[2] term “indirectly issuing” required only that a request from the host computer go through some other component before it is sent to the database.

Affirmed.

West Headnotes (9)

#### [1] Patents

🔑 De novo review in general

#### Patents

🔑 Novelty; anticipation

Anticipation is a question of fact, which is reviewed for substantial evidence, while patent claim construction is a matter of law, reviewed de novo.

6 Cases that cite this headnote

#### [2] Patents

🔑 Construction and Operation of Reexamined Patents

#### Patents

🔑 Language of claims in general

#### Patents

🔑 Specifications and Drawings; Written Description

During examination, patent claims are to be given their broadest reasonable interpretation consistent with the specification, and claim language should be read in light of the specification as it would be interpreted by one of ordinary skill in the art; “broadest reasonable construction” rule applies to reexaminations as well as initial examinations.

47 Cases that cite this headnote

#### [3] Patents

🔑 Amendment of Application

An applicant's ability to amend his claims to avoid cited prior art distinguishes proceedings before Patent and Trademark Office (PTO) from proceedings in federal district courts on issued patents.

3 Cases that cite this headnote

#### [4] Patents

🔑 Data processing

In light of the description in the specification, term “user computer,” as used in patent claim describing a method of operating a distributed data processing system including a plurality of independent, not necessarily uniform, general purpose user computers to run respective user application programs, properly encompassed the mainframes and minicomputers of the cited prior art; term “user computer” was used to refer to the function of the computer in running a user application, not to the identification of the user computer as a personal computer as opposed to a mainframe.

1 Cases that cite this headnote

[5] **Patents**

🔑 Specification disclaimer

Patentee may demonstrate an intent to deviate from the ordinary and accustomed meaning of a claim term by including in the specification expressions of manifest exclusion or restriction, representing a clear disavowal of claim scope.

5 Cases that cite this headnote

[6] **Patents**

🔑 Hearing and determination

Patent and Trademark Office's Board of Patent Appeals and Interferences has broad discretion as to the weight to give to declarations offered in the course of prosecution of patent.

1 Cases that cite this headnote

[7] **Patents**

🔑 Data processing

Term "indirectly issuing," as used in patent claim describing a method of operating a distributed data processing system including a plurality of independent, not necessarily uniform, general purpose user computers to run respective user application programs, required only that a request from the host computer go through some other component before it is sent to the database, and was not limited to a user computer application program issuing a call for data as though from resident storage, coupled with an intermediate step redirecting the call to the remote data center computer.

1 Cases that cite this headnote

[8] **Patents**

🔑 Preferred embodiment

Even when the specification describes only a single embodiment, claims of a patent should not be read restrictively unless the patentee has demonstrated a clear intention to limit the claim scope using words or expressions of manifest exclusion or restriction.

11 Cases that cite this headnote

[9] **Patents**

🔑 In general; utility

US Patent 4,714,989. Invalid.

Cases that cite this headnote

**Attorneys and Law Firms**

\*1361 John M. Collins, Hovey Williams LLP, of Kansas City, MO, argued for appellant.

C. Edward Polk, Jr., Associate Solicitor, Office of the Solicitor, United States Patent and Trademark Office, of Arlington, VA, argued for appellee. With him on the brief were John M. Whealan, Solicitor; and Linda Moncys Isacson, Associate Solicitor.

Barry E. Bretschneider, Morrison & Foerster LLP, of McLean, VA, for amicus curiae Novell, Inc. With him on the brief was Charles C. Carson.

Before RADER, BRYSON, and GAJARSA, Circuit Judges.

**Opinion**

BRYSON, Circuit Judge.

This is an appeal from a decision of the United States Patent and Trademark Office's Board of Patent Appeals and Interferences in a reexamination proceeding, Appeal No.2003-0349. The Board upheld a patent examiner's rejection, in reexamination, of several claims of U.S. Patent No. 4,714,989 ("the '989 patent"). The owner of the patent, American Academy of Science Tech Center, seeks review of the Board's decision. We affirm.

**I**

Before the proliferation of personal computers, it was common for a multiple-user computer system to be arranged so that each user would interface with a mainframe computer by using a so-called "dumb terminal," i.e., a terminal that did not contain processors and performed only input and output functions. Several dumb terminals would be connected to a single mainframe computer, which would run the user

applications. The mainframe computer would receive input from and provide output to users through the dumb terminals. The user applications run by the mainframe computer would access data that was stored in a database residing on the mainframe.

In contrast to systems using a mainframe in conjunction with dumb terminals, the '989 patent describes a network in which the processing of user applications is distributed among several computers. In the '989 patent system, user applications are run on the user stations, while the database resides on a dedicated database computer. Several user stations are networked to the database computer so that a user application running on a user station can store data to and retrieve data from the database residing on the database computer. The patent describes using a "data base simulator" to "enable[ ] an application program ... at the user station to call for storage or retrieval of data from the data center as though it were calling for data from a data base resident at the user station ...." '989 patent, col. 6, ll. 57-62.

The '989 patent was issued on December 22, 1987, on an application filed on October 20, 1986. The 1986 application was a continuation of an application filed on February 19, 1982. In 1991, American \*1362 Academy sued Novell, Inc., in the United States District Court for the Northern District of California, alleging that Novell had infringed the '989 patent. In response, Novell filed a reexamination request on June 6, 1994. The district court stayed the litigation pending the outcome of the reexamination.

During the reexamination, the examiner rejected each of the claims of the '989 patent as anticipated by several references. Four of those references, the Canaday, Lowenthal, Passafiume, and Hsiao references, are at issue in this appeal. The Canaday, Lowenthal, and Passafiume references describe what American Academy calls "back-end" systems. In such back-end systems, several mainframe computers interface with a single database or "back-end" computer. The mainframe computers run user applications and communicate with the database computer to store and retrieve data from a database that resides on the database computer. The Hsiao reference describes networking several personal computers to a database computer that is connected to a database.<sup>1</sup>

The claims under reexamination require a plurality of "general purpose user computers" that are connected to a "data center computer." The examiner determined that the mainframe computers in the asserted references (and

the personal computers of Hsiao) anticipated the "general purpose user computers" element of the claims under examination. The examiner also found that the references taught an additional disputed claim element, that of "indirectly issuing data base calls," since in each of the references database calls from the user application to the database manager program at the database computer must be sent though some other program or hardware.

In response to those rejections, American Academy submitted arguments and declarations to the effect that the claims of the '989 patent are limited to user computers, such as personal computers, that are each dedicated to a single user. American Academy also argued that the "indirectly issuing" element should be limited to cases in which the user application, when making a database call, is not aware that it is making a remote database call but instead believes that it is making a local database call to the computer running the user application. American Academy thus in effect urged that the "indirectly issuing" limitation should be limited to the use of a database simulator program such as that described in the '989 specification. The examiner was not persuaded by American Academy's arguments and continued to reject the claims both as anticipated and as obvious in light of the cited references.

American Academy appealed the examiner's rejections to the Board, which affirmed the rejections. Although the examiner had been persuaded by the time of appeal that the patent was limited to single-user computers, the Board adopted a broader construction of the claim term "user computer" that encompassed any computer "capable of running application programs for a user." That construction reached the back-end systems of the prior art. The Board also construed the claim term "indirectly issuing" broadly to include "the request going through some other \*1363 component before it is sent to the data base."

American Academy filed a rehearing request, asserting that the Board's claim construction was broader than the examiner's and that the Board's decision was thus based on a new ground of rejection. The Board granted the request, but it concluded that even under American Academy's construction it would have been obvious to replace the mainframe computers of the prior art with personal computers. In response to a further rehearing request in which American Academy asserted that the Board's obviousness rejection also constituted a new ground of rejection, the Board directed that the issue of obviousness be further prosecuted.

In subsequent proceedings before the examiner, American Academy submitted additional declarations, both as to claim construction and as to the issue of obviousness. The examiner, however, again rejected the claims as anticipated and obvious over the prior art.

American Academy appealed the rejections to the Board for a second time. The Board addressed claim 1 in detail, finding that it was representative of the other claims on appeal. Based on the principle that during examination claims should be given their broadest reasonable construction, the Board construed the term “user computer” to encompass the mainframe computers of the prior art. The Board explained that “[a]lthough the patent disclosure does refer to servicing a user in the singular, it also notes that the user could be a person, another device, or machine....” The Board added that it was not persuaded by the declarations submitted by American Academy because “the declarations offer no evidence in support of appellant's definition” and “[i]nstead ... merely offer [the declarant's] opinions as to what the artisan would have understood upon reading the patent disclosure.” The Board rejected American Academy's argument that a broad construction of the term “user computer” would vitiate the word “user.” Under its definition, the Board explained, the term “user computer” did not include all computers, but excluded special purpose computers, such as those that “are not intended to interface with a user for application programming under any circumstances.”

The Board further concluded that the broadest reasonable construction of “indirectly issuing a database call” requires only “that a request from the host computer go through some other component before it is sent to the database.” The Board found American Academy's arguments to the contrary unpersuasive and again found the declarations submitted in support of American Academy's narrower construction to be unsupported by the evidence before the examiner. Finally, the Board upheld the alternative obviousness rejections, concluding that the examiner had established a prima facie case of obviousness that was rebutted by American Academy's arguments or evidence.

## II

[1] We review the Board's legal conclusions de novo and uphold its factual findings if they are supported by substantial evidence. See *In re Bass*, 314 F.3d 575, 576 (Fed.Cir.2002). Anticipation is a question of fact, which we

review for substantial evidence, see *In re Hyatt*, 211 F.3d 1367, 1371–72 (Fed.Cir.2000), while claim construction is a matter of law, reviewed de novo, see *In re Baker Hughes Inc.*, 215 F.3d 1297, 1301 (Fed.Cir.2000). The primary issue on appeal is the construction of \*1364 the terms “user computer” and “indirectly issuing.” Construing those claim terms broadly, the Board found that each of the references, Canaday, Lowenthal, Passafiume, and Hsiao, taught both the use of “user computers” and systems that “indirectly issue” database calls. American Academy does not challenge the sufficiency of the evidence with respect to the Board's decision on any other claim limitations.

[2] During examination, “claims ... are to be given their broadest reasonable interpretation consistent with the specification, and ... claim language should be read in light of the specification as it would be interpreted by one of ordinary skill in the art.” *In re Bond*, 910 F.2d 831, 833 (Fed.Cir.1990); accord *Bass*, 314 F.3d at 577 (“[T]he PTO must apply the broadest reasonable meaning to the claim language, taking into account any definitions presented in the specification.”); *In re Cortright*, 165 F.3d 1353, 1358 (Fed.Cir.1999) (“Although the PTO must give claims their broadest reasonable interpretation, this interpretation must be consistent with the one that those skilled in the art would reach.”); *Hyatt*, 211 F.3d at 1372. The “broadest reasonable construction” rule applies to reexaminations as well as initial examinations. See *In re Hiniker Co.*, 150 F.3d 1362, 1368 (Fed.Cir.1998); *In re Yamamoto*, 740 F.2d 1569, 1571 (Fed.Cir.1984). Giving claims their broadest reasonable construction “serves the public interest by reducing the possibility that claims, finally allowed, will be given broader scope than is justified.” *Yamamoto*, 740 F.2d at 1571; accord *Hyatt*, 211 F.3d at 1372; *In re Zletz*, 893 F.2d 319, 322 (Fed.Cir.1989) (“An essential purpose of patent examination is to fashion claims that are precise, clear, correct, and unambiguous. Only in this way can uncertainties of claim scope be removed, as much as possible, during the administrative process.”).

[3] Construing claims broadly during prosecution is not unfair to the applicant (or, in this case, the patentee), because the applicant has the opportunity to amend the claims to obtain more precise claim coverage. See *Yamamoto*, 740 F.2d at 1571–72 (“Applicants' interests are not impaired since they are not foreclosed from obtaining appropriate coverage for their invention with express claim language. An applicant's ability to amend his claims to avoid cited prior art distinguishes proceedings before the PTO from

proceedings in federal district courts on issued patents. When an application is pending in the PTO, the applicant has the ability to correct errors in claim language and adjust the scope of claim protection as needed.”); *Zletz*, 893 F.2d at 321 (“[D]uring patent prosecution when claims can be amended, ambiguities should be recognized, scope and breadth of language explored, and clarification imposed.”); *Hyatt*, 211 F.3d at 1372.

[4] American Academy appeals the rejection of claims 1–17 and 20–26 to this court. However, the parties agree that the construction of the terms “user computer” and “indirectly issuing” is determinative as to all the claims on appeal. Claim 1 is thus representative of all the claims at issue for purposes of the appeal. It claims:

1. A method of operating a distributed data processing system including *a plurality of independent, not necessarily uniform, general purpose user computers* to run respective user application programs to process user data and a \*1365 data center computer to store, retrieve, and update user data, said user computers being selectively interconnected with said data center computer by respective data communication hardware over data communication network means, said method comprising the steps of:

- (a) managing in a data center computer by means of a data base manager program a user data base of user data items to perform data operations of storing, updating, and retrieving said user data items in response to data base calls for such operations from a user computer;
- (b) running a user application program in a general purpose user computer to process user data, *said user application program indirectly issuing data base calls* for data operations regarding user data items in response to requirements for said data operations by said user application program;
- (c) in response to a data base call regarding a user data item from a user application program, initiating by said user computer only a data communication link with said data center computer over data communication network means;
- (d) communicating said data base call from said user computer to said data center computer;

(e) performing by said data center computer said data operation regarding said user data item defined by said data base call; and

(f) communicating an appropriate response to said data base call from said data center computer to said user computer.

(emphasis added).

## A

[5] American Academy first argues that the term “user computer” should be limited in the ’989 patent to refer only to single-user computers. Although the claim does not contain words of restriction that would suggest that narrow construction, American Academy argues that the specification makes clear that the claim language should be given an interpretation narrower than the ordinary meaning of the claim language would suggest. This court has recognized that a patentee “may demonstrate an intent to deviate from the ordinary and accustomed meaning of a claim term by including in the specification expressions of manifest exclusion or restriction, representing a clear disavowal of claim scope.” *Teleflex, Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313, 1325 (Fed.Cir.2002); *accord Alloc, Inc. v. Int’l Trade Comm’n*, 342 F.3d 1361, 1368 (Fed.Cir.2003) (“A patent applicant may consistently and clearly use a term in a manner either more or less expansive than its general usage in the relevant art, thereby expanding or limiting the scope of the term in the context of the patent claims.”); *SciMed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc.*, 242 F.3d 1337, 1343–44 (Fed.Cir.2001).

In arguing that the specification of the ’989 patent makes clear that multi-user computers, such as mainframes and minicomputers, do not fall within the definition of “user computer” as that term is used in the ’989 patent, American Academy points to language in the Background of the Invention portion of the specification discussing configurations that use mainframes connected to dumb terminals. According to American Academy, by pointing out the deficiencies with multi-user computers such as mainframes, the specification excludes those mainframes from the definition of user computers.

It is true that the specification suggests that, as the number of users using a mainframe \*1366 increases,

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