

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(2) is not binding precedent of the Board.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. 12

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte THOMAS J. GREENBOWE
AND MICHELLE A. McPHILLEN

Appeal No. 96-2865
Application 08/081,561¹

ON BRIEF

Before ABRAMS, STAAB and McQUADE, Administrative Patent Judges.
McQUADE, Administrative Patent Judge.

DECISION ON APPEAL

¹ Application for patent filed June 23, 1993.

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This appeal is from the final rejection of claims 1 through 41, all of the claims pending in the application.

The invention relates to "multimedia computer systems that expose students to scientific principles and concepts through a variety of multimedia interactions" (specification, page 1).

Claim 1 is illustrative and reads as follows:

1. An apparatus for teaching science and engineering to a user, the apparatus comprising:

a means for displaying imagery;

a means for causing a plurality of objects to be pictured on the display means, the objects being apparatus, equipment, devices, materials, and supplies used in science and engineering;

a means by which the user can assemble a plurality of the objects pictured on the display means into an operating pictorial representation of an operating experimental configuration, the experimental configuration being characterized by a relationship among a plurality of experimental parameters;

a means by which the user can simulate the performance of an experiment using the pictorial representation of the experimental configuration, an experiment being a method of measuring one of the plurality of experimental parameters by means of the experimental configuration, the operation of the pictorial representation of the experimental configuration being governed by the same relationship among the experimental parameters that characterizes the operation of the experimental configuration.

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The reference relied upon by the examiner as evidence of anticipation is:

Smith et al. (Smith), "The Acid Test: Five Years of Multimedia Chemistry," Special Issue IBM Multimedia, Supplement to T.H.E. Journal, pp. 21-23, September 1991.

The appealed claims stand rejected as follows:

a) claims 1 through 41 under 35 U.S.C. § 112, first paragraph, as being based on a specification which fails to provide an adequate written description of the invention;

b) claims 1 through 41 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter the appellants regard as the invention; and

c) claims 1 through 31 and 33 through 41 under 35 U.S.C. § 102(b) as being anticipated by Smith.

Reference is made to the appellants' main and reply briefs (Paper Nos. 6 and 8) and to the examiner's answer (Paper No. 7) for the respective positions of the appellants and the examiner with regard to the propriety of these rejections.

Before discussing the merits of the foregoing rejections, we note that the appellants have raised as an issue in this appeal the objection to the drawings under 35 CFR § 1.83(a) which was made by the examiner in the final rejection (see pages 70 through

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73 in the main brief and pages 3 and 4 in the reply brief). This objection is not directly connected with the merits of issues involving a rejection of claims and therefore is reviewable by petition to the Commissioner rather than by appeal to this Board. See In re Hengehold, 440 F.2d 1395, 1403-1404, 169 USPQ 473, 479 (CCPA 1971). Accordingly, we shall not review or further discuss the examiner's objection to the drawings.

Turning now to the rejections on appeal, it is not clear from the examiner's explanation (see pages 4, 5 and 9 through 11 in the answer) whether the 35 U.S.C. § 112, first paragraph, rejection is based on an alleged failure of the appellants' specification to comply with the written description requirement, the enablement requirement or both of these requirements of 35 U.S.C. § 112, first paragraph.² For the sake of completeness, we have assumed that the rejection is based on an alleged failure to comply with both requirements.

The test for determining compliance with the written description requirement is whether the disclosure of the application as originally filed reasonably conveys to the artisan

² The written description and enablement requirements of 35 U.S.C. § 112, first paragraph, are separate and distinct. Vas-Cath, Inc. v. Mahurkar, 935 F.2d 1555, 1563, 19 USPQ2d 1111, 1117 (Fed. Cir. 1991).

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that the inventors had possession at that time of the later claimed subject matter, rather than the presence or absence of literal support in the specification for the claim language. In re Kaslow, 707 F.2d 1366, 1375, 217 USPQ 1089, 1096 (Fed. Cir. 1983). The content of the drawings may also be considered in determining compliance with the written description requirement. Id.

According to the examiner, the appellant's disclosure does not provide clear support or antecedent basis for a number of recitations in the appealed claims. A review of the appellants' disclosure as originally filed, however, including the originally filed claims and those portions of the specification highlighted by the appellants in the main brief (pages 22 through 33), indicates that the original disclosure would indeed reasonably convey to the artisan that the appellants had possession at that time of the subject matter now set forth in claims 1 through 41.

Insofar as the enablement requirement is concerned, the dispositive issue is whether the appellants' disclosure, considering the level of ordinary skill in the art as of the date of the appellants' application, would have enabled a person of such skill to make and use the appellants' invention without undue experimentation. In re Strahilevitz, 668 F.2d 1229, 1232,

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212 USPQ 561, 563-64 (CCPA 1982). In calling into question the enablement of the appellants' disclosure, the examiner has the initial burden of advancing acceptable reasoning inconsistent with enablement. Id.

The only reasoning inconsistent with enablement advanced by the examiner involves the lack of detail in the appellants' specification as to the software necessary to implement the claimed invention. According to the examiner, "[w]ithout a clear description of the software, one [of] ordinary skill in the art can not practice the invention without undue experimentation" (answer, page 11). The appellants' specification indicates, however, that the necessary software would be relatively straightforward. It is not clear, nor has the examiner cogently explained, why the mere lack of a detailed description of such software would prevent a person of ordinary skill from making and using the appellants' invention without undue experimentation. Thus, the examiner has not met the burden of advancing acceptable reasoning inconsistent with enablement.

In light of the foregoing, we shall not sustain the standing 35 U.S.C. § 112, first paragraph, rejection of claims 1 through 41.

As for the standing 35 U.S.C. § 112, second paragraph,

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rejection of claims 1 through 41, the examiner has set forth a number of reasons why claims 1 through 31 and 33 through 41 are indefinite including unclear and confusing claim language, improper Markush groupings, and improper claim dependencies (see pages 5 through 8 in the answer).

The second paragraph of 35 U.S.C. § 112 requires claims to set out and circumscribe a particular area with a reasonable degree of precision and particularity. In re Johnson, 558 F.2d 1008, 1015, 194 USPQ 187, 193 (CCPA 1977). In determining whether the claims meet this standard, the definiteness of the language employed in the claims must be analyzed, not in a vacuum, but always in light of the teachings of the prior art and of the particular application disclosure as it would be interpreted by one possessing the ordinary level of skill in the pertinent art. Id.

Notwithstanding the position taken by the examiner, claims 1 through 31 and 33 through 41 do indeed set out and circumscribe a particular area with a reasonable degree of precision and particularity when they are read in light of the underlying disclosure. Moreover, these claims do not contain any improper Markush groupings or claim dependencies.

Therefore, we shall not sustain the standing 35 U.S.C.

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§ 112, second paragraph, rejection of claims 1 through 31 and 33 through 41.

We shall sustain, however, the standing 35 U.S.C. § 112, second paragraph, rejection of claim 32. In short, this claim does not set out and circumscribe the apparatus recited therein with any degree, much less a reasonable degree, of precision and particularity. The appellants' explanation that claim 32 is a linking claim (see page 38 in the main brief) is of no moment.

Finally and with regard to the standing 35 U.S.C. § 102(b) rejection of claims 1 through 31 and 33 through 41, Smith discloses an interactive videodisc system which allows students to study chemical reactions that are too hazardous, too expensive or too time consuming to study in a wet lab. As described in the reference, the system includes

four videodiscs containing 39 lessons that not only demonstrate laboratory simulations and techniques, but are also totally interactive, that is, they require extensive student response. These lessons expand course content, reinforce learning and allow students to perform procedures and make decisions about laboratory experiments that would be difficult with traditional instructional techniques.

The lessons are used to replace, not just supplement, up to half of the wet lab experience, depending on the course. For example, students find that salts ionize in water by performing experiments then testing for the presence of ions. They generate hypotheses about the ionization of salts and can perform any of several tests to check their ideas,

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trying experiments again, if necessary, until they feel comfortable with the concepts. Freedom to try new strategies and to experiment is greater with the videodisc-based lessons than in the wet lab, which is strictly limited by time, equipment and the availability of chemicals [page 21].

Anticipation is established only when a single prior art reference discloses, expressly or under principles of inherency, each and every element of a claimed invention. RCA Corp. v. Applied Digital Data Systems, Inc., 730 F.2d 1440, 1444, 221 USPQ 385, 388 (Fed. Cir. 1984). In other words, there must be no difference between the claimed invention and the reference disclosure, as viewed by a person of ordinary skill in the field of the invention. Scripps Clinic & Research Found. v. Genentech Inc., 927 F.2d 1565, 1576, 18 USPQ2d 1001, 1010 (Fed. Cir. 1991).

Independent claim 1 recites an apparatus comprising, inter alia, "means by which the user can assemble a plurality of the objects pictured on the display means into an operating pictorial representation of an operating experimental configuration, the experimental configuration being characterized by a relationship among a plurality of experimental parameters" and "means by which the user can simulate the performance of an experiment using the pictorial representation of the experimental configuration" Independent claim 17 recites a method comprising, inter alia, the steps of "enabling the student to assemble a plurality

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of the objects pictured on the display means into an operating pictorial representation of an operating experimental configuration, the experimental configuration being characterized by a relationship among a plurality of experimental parameters" and "enabling the student to simulate the performance of an experiment using the pictorial representation of the experimental configuration" To a certain degree, the examiner is correct in observing (see pages 9 and 13 in the answer) that Smith broadly relates to the general concept underlying the claimed invention, i.e., the use of an interactive multimedia system to expose students to scientific principles and concepts. Nonetheless, the apparatus and method actually disclosed by Smith do not meet the foregoing specific limitations in claims 1 and 17.

Accordingly, we shall not sustain the standing 35 U.S.C. § 102(b) rejection of claims 1 and 17, or of claims 2 through 16, 18 through 31 and 33 through 41 which depend therefrom, as being anticipated by Smith.

In summary, the decision of the examiner:

a) to reject claims 1 through 41 under 35 U.S.C. § 112, first paragraph, is reversed;

b) to reject claims 1 through 41 under 35 U.S.C. § 112,

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second paragraph, is affirmed with respect to claim 32 and reversed with respect to claims 1 through 31 and 33 through 41; and

c) to reject claims 1 through 31 and 33 through 41 under 35 U.S.C. § 102(b) reversed.

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No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a).

AFFIRMED-IN-PART

NEAL E. ABRAMS)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
LAWRENCE J. STAAB)	APPEALS AND
Administrative Patent Judge)	INTERFERENCES
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