

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opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.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. 10

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte NOZOMU SHIOTSU and RIE MATSUBARA

Appeal No. 98-2805
Application 08/663,849¹

ON BRIEF

Before FRANKFORT, STAAB and NASE, Administrative Patent Judges.

FRANKFORT, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 1, 2, 4 through 12 and 14 through 16. Claims 3 and 13, the only other claims remaining in the application, have been objected to as being dependent upon a rejected base (parent) claim, but have been indicated to be

¹ Application for patent filed June 14, 1996.

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allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Appellants' invention relates to a planetarium which is generally used to project a state of star fields, constellations, and celestial bodies, or to simulate their various movements, not only as observed from earth but also from other planets or any viewpoint in space. An object of the invention is to provide a planetarium in which one can readily recognize his position in a projected star field, and can easily understand positional relationships between star fields, constellations and celestial bodies in space with respect to each other. As noted on page 3 of the specification, in its simplest form the invention can be explained in the following manner:

"[p]rovided that a first viewpoint is defined as the operator's and the viewer's eyes and that a second viewpoint is set as a point from which the view observed from the first viewpoint as well as the first viewpoint, in this case the operators and the viewers, can be observed, the image as viewed from the second viewpoint becomes a bird's eye view overlooking the star fields, the constellation, and the celestial bodies as observed from the first viewpoint including the first viewpoint itself."

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Independent claims 1 and 9 are representative of the subject matter on appeal and a copy of those claims, as reproduced from the Appendix to appellants' brief, is attached to this decision.

The single prior art reference of record relied upon by the examiner in rejecting the appealed claims is:

Hattori	5,492,475	Feb. 20, 1996
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Claims 1, 2, 4, 5, 7 through 12 and 14 through 16 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Hattori.

Claim 6 stands rejected under 35 U.S.C. § 103 as being unpatentable over Hattori.

Rather than reiterate the examiner's full statement of the above-noted rejections and the conflicting viewpoints advanced by the examiner and appellants regarding those rejections, we make reference to the final rejection (Paper No. 6, mailed

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May 28, 1997) and the examiner's answer (Paper No. 9, mailed March 10, 1998) for the examiner's reasoning in support of the rejections, and to appellants' brief (Paper No. 8, filed November 26, 1997) for appellants' arguments thereagainst.

OPINION

In reaching our decision in this appeal, we have given careful consideration to appellants' specification and claims, to the applied prior art reference, and to the respective positions articulated by appellants and the examiner. As a consequence of our review, we have made the determinations which follow.

Looking first to the examiner's rejection of claims 1, 2, 4, 5, 7 through 12 and 14 through 16 under 35 U.S.C. § 102(e) as being anticipated by Hattori, we initially observe that claims 4 and 14 respectively depend from claims 3 and 13,

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which the examiner has indicated contain allowable subject matter. Thus, given their dependency, it is apparent that claims 4 and 14 would likewise contain the same allowable subject matter as the claims from which they depend, and accordingly would not be anticipated by Hattori. For that reason, the examiner's rejection of claims 4 and 14 under 35 U.S.C. § 102(e) will not be sustained.

As for the examiner's rejection of independent claims 1 and 9 under 35 U.S.C. § 102(e) based on Hattori, we note that Hattori discloses a planetarium (Fig. 4) which uses a plurality of mutually separate and independent projection apparatus (2 and 3a through 3g) for projecting a star field, the sun, moon and planets. Each of the individual projection apparatus includes a high performance CPU. As indicated in the Abstract and in column 5, lines 15-49, time, date and viewer coordinates relating to a first viewpoint are inputted by the console (4) to the host CPU (41). The host computer then computes the Julian calendar date, and transmits the results to the plurality of high performance CPUs in parallel. Each high performance CPU calculates in parallel data relative

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to the positional orientation of the particular projection apparatus which incorporates that CPU in accordance with data received from the host computer. Each of the high performance CPUs then controls the positional orientation of its corresponding projection apparatus based on the results calculated. The resulting image projected on the dome of the planetarium is a composite of the images projected from the star field projection apparatus (2) and the individual projection apparatus (3a-3g) and depicts the state of the star field, the sun, moon and planets, etc., from the first perspective (i.e., the inputted time, date and viewer coordinates).

What Hattori lacks is any recognition of appellants' problem and any mechanism for designating a second viewpoint different from the first viewpoint and display means for displaying a state of celestial bodies as observed from the second viewpoint, so that one obtains a "bird's eye view overlooking the star fields, the constellation, and the celestial bodies as observed from the first viewpoint including the first viewpoint" (specification, page 3). When

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the "means" clauses of appellants' claims 1 and 9 on appeal are properly viewed from the perspective of 35 U.S.C.

§ 112, sixth paragraph, we find nothing in the portion of Hattori relied upon by the examiner (i.e., col. 5, lines 14-49) which relates at all to a second viewpoint and means for designating and displaying a state of celestial bodies from said second viewpoint, as is required in the claims on appeal. The plurality of projection apparatus in Hattori at any given time merely provides a composite projected image on the dome of a planetarium that is representative of a single viewpoint (i.e., the inputted time, date and viewer coordinates).

Based on the foregoing, we will not sustain the examiner's rejection of claims 1, 2, 4, 5, 7 through 12 and 14 through 16 under 35 U.S.C. § 102(e) as being anticipated by Hattori.

With regard to the examiner's rejection of dependent claim 6 under 35 U.S.C. § 103 based on Hattori, we observe that our determination above with regard to independent claim 1 likewise disposes of this rejection.

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To summarize, neither the examiner's rejection of claims 1, 2, 4, 5, 7 through 12 and 14 through 16 under 35 U.S.C. § 102(e) as being anticipated by Hattori, or the rejection of claim 6 under 35 U.S.C. § 103 based on Hattori has been sustained.

The decision of the examiner is, accordingly, reversed.

REVERSED

CHARLES E. FRANKFORT)	
Administrative Patent Judge)	
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LAWRENCE J. STAAB)	BOARD OF PATENT
Administrative Patent Judge)	
)	APPEALS AND
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JEFFREY V. NASE)	
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APPENDIX

1. A planetarium for projecting a state of celestial bodies as observed from a first viewpoint onto a dome, comprising:
 - a designating means for designating a second viewpoint being different from the first viewpoint; and
 - a display means for displaying a state of celestial bodies as observed from the second viewpoint designated by the designating means.

9. A planetarium comprising:
 - a dome;
 - a first calculation means for determining the state of celestial bodies as viewed from a first viewpoint at a given time and date;
 - a projector for projecting the state of celestial bodies as viewed from the first viewpoint onto the dome determined by the first calculation means;
 - a second calculation means for determining a state of celestial bodies as viewed from a second viewpoint being different from the first viewpoint; and
 - a display means for displaying the state of celestial bodies as viewed from the second viewpoint determined by the second calculation means.