

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opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.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. 24

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte HIROMI ARAKI

Appeal No. 96-3323
Application 08/022,922¹

ON BRIEF

Before JERRY SMITH, FLEMING and DIXON, **Administrative Patent Judges.**

DIXON, **Administrative Patent Judge.**

DECISION ON APPEAL

This is a decision on appeal from the Examiner's final rejection of claims 1-10², which are all of the claims pending in this application.

We reverse.

¹ Application for patent filed February 26, 1993.

² Claim 11 was deleted by an after final amendment combining those limitations into the independent claims 1 and 10.

BACKGROUND

The invention is directed to an apparatus and method for designing an object or part in a structure using computer aided design. The design process may be performed in parallel with a number of designers for teamwork designing of parts of the structure/ assembly. Each designer is provided with the latest information on other parts which are referenced in relationship with the part which is under the design control of a specific designer. The system maintains a number of databases which store data concerning (1) part shape, (2) part control which pertains to who controls the design and who refers to the design; and (3) assembly structure of the object. The system tracks those designers who refer to the design of a part, but are not the designer thereof. When the design has been modified, the system informs those who refer to the part under design of the most recent data concerning the part design.

Independent claim 1³ is representative of the invention and reproduced as follows:

1. A teamwork CAD system for designing an object by a plurality of designers who design in parallel the respective parts of said object to which they are assigned using a plurality of data processing units, said system comprising:

a part shape data base for storing the data on the shape of each part;

³ Claim 1 was modified by entry of the after final amendment, filed August 24, 1995, which incorporated limitations from claim 11 and canceled claim 11. The Examiner modified the rejection in the Examiner's answer to correspond to the change.

a part control data base for registering the data on the designer who is designing or modifying each part at each point of time in correspondence with the data on the designer who is referring to said part;

a data control unit for updating the corresponding part shape data in said part shape data base in accordance with the nature of the modification when a part is modified in one of said data processing units, for retrieving and extracting designer information referring to said part and designer which has been modified from said part control data base, and for transmitting the fact that said part has been modified and the nature of the modification to the data processing unit of the extracted designer information; and

an assembly structure data base storing structural data of the parts of the object.

The prior art references of record relied upon by the Examiner in rejecting the appealed claims are:

Bly et al. (Bly)	5,008,853	Apr. 16, 1991
Gore et al. (Gore)	5,128,878	Jul. 07, 1992
Sasagase et al. ⁴ (Sasagase) (Japanese Kokai Application)	Hei 2-48774	Feb. 14, 1990

Hardwick et al., "USING A RELATIONAL DATABASE AS AN INDEX TO A DISTRIBUTED OBJECT DATABASE IN ENGINEERING DESIGN SYSTEMS," Second International Conference on Data and Knowledge Systems for Manufacturing and Engineering, 16-18 October 1989, pp. 4-10. (Hardwick)

Claims 1-6 are rejected under 35 U.S.C. § 103 over Gore in view of Hardwick and further in view of Sasagase. Claims 7-10 are rejected under 35 U.S.C. § 103 over Gore in

⁴ We refer to the translation by The Ralph McElroy Translation Company dated August 1996 in our citations thereto. A copy of the translation is included.

view of Hardwick and further in view of Bly and Sasagase.

Rather than reiterate the conflicting viewpoints advanced by the Examiner and the appellant, we make reference to the brief, filed November 27, 1995, (Paper No. 17), the reply brief, filed April 23, 1996, (Paper No. 19) and answer, mailed February 23, 1996, (Paper No. 18) for the details thereto.

OPINION

After a careful review of the evidence before us we disagree with the Examiner that claims 1-10 are properly rejected under 35 U.S.C. § 103, and we will not sustain the rejection of claims 1-10. As a consequence of our review, we make the determinations which follow with respect to the Examiner's rejection.

Claims 1-6 are rejected under 35 U.S.C. § 103 over Gore in view of Hardwick and further in view of Sasagase.⁵

With respect to appellant's argument to Hardwick, appellant argues that the "Examiner concedes . . ." certain elements of the claim language are not met by the reference. (See brief at pages 10-11.) In particular, appellant argues that the assembly structure database is "conceded" as not being taught by any of the references. (See brief

⁵ During the prosecution, claim 11 was presented in an amendment adding the "assembly structure database." The Examiner added the Sasagase reference to reject this claim. The limitation of claim 11 was added into the independent claims after the final rejection was made. Therefore, the Examiner's answer contains the text of the rejection which we review.

at page 11.)

The Examiner states in the final rejection at paragraph 19 that Sasagase does not teach the assembly structure database.⁶ The Examiner states in paragraph 20 of the final rejection that “the assembly structure database would have been necessary to interface all the parts into an integral design.” (Emphasis added.) In the answer, the Examiner states that the “assembly structure database” is

Not specifically disclosed in any of the references.

It would have been obvious for one of ordinary skill in the art of computers to include a part shape database for the object database, a part control database for the relational index, and an assembly structure database in the combined inventions of Sasagase et al. and Hardwick et al.'s, because Hardwick et al.'s system was useful for computer aided design (Title) and part shape would have been an object attribute in the object database necessary to design the component parts and a part control database would have been a part of the relational index of Hardwick et al. necessary for concurrency and version control (page 5, Column 1, line 1-11), and the assembly structure database would have been necessary to interface all the parts into an integral working whole. It would have been obvious for one of ordinary skill in the art of computers to combine the apparatus of Gore et al. with the database architecture of Hardwick et al. and Sasagase et al. to realize teamwork design of configurations of objects with different shapes because Gore et al. taught using a design network of client work stations served by common file servers to share files and devices in a cooperative work environment, Sasagase et al. taught using an object database and a control database which could best have been realized by a relational database for ease of querying and Hardwick et al. taught that their database

⁶ We note that Sasagase teaches a “part composition database” (pages 6 and 10 with Figures 2A-2C) which the Examiner has not mentioned in the rejection. It appears that this database may teach an assembly structure of multiple parts of a larger design of parts. This has not been set forth in the rejection nor arguments thereto presented by the Examiner. We make no findings thereto.

architecture of an object database which could be queried by a relational database was useful for computer aided design and file sharing of versioned objects in a cooperative network environment. (answer, pgs. 5-6)
(Emphasis in the original deleted and emphasis added.)

Using the Examiner's rejection as set forth in the final rejection and the Examiner's answer, it is unclear what basis, either obviousness or inherency, the Examiner is relying upon to meet the "assembly structure database" claim limitation which the Examiner has explicitly stated is not taught by the prior art references.

Appellant argues that the Examiner concedes that the "assembly structure database" is not shown in any of the references and that this limitation would not be "necessary" as the Examiner asserts in the answer on pages 4-5. We agree with appellant's argument that the Examiner's rejection is in error. With respect to appellant's argument to the Examiner's statement that "the assembly structure database would have been necessary to interface all parts into an integral design," we agree with appellant that if the assembly database were not taught by the prior art references as the Examiner stated, then some additional line of reasoning would have been necessary for the Examiner to set forth a **prima facie** case.

If the Examiner is relying upon inherency for the prior art meeting this limitation, we find that the Examiner has not set forth a showing why the "assembly structure

database" would have been required in the prior art systems as described by the Examiner. The Examiner's assertion that the "assembly structure database" would have been "necessary to interface all the parts into an integral working whole" is mere speculation. We disagree with the Examiner that the "assembly structure database" would have been "necessary" if it is not taught or suggested by the prior art references. The Federal Circuit recently discussed inherency and whether an aspect of a claimed invention would be necessary from the disclosure in **In re Robertson**, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999). The Federal Circuit stated "[t]o establish inherency, the extrinsic evidence 'must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill.' " citing **Continental Can Co. v. Monsanto Co.**, 948 F.2d 1264, 1268, 20 U.S.P.Q.2d 1746, 1749 (Fed. Cir. 1991). The Federal Circuit further stated "[i]nherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may

result from a given set of circumstances is not sufficient." **Id.** at 1269, 20 U.S.P.Q.2d at 1749 quoting **In re Oelrich**, 666 F.2d 578, 581, 212 U.S.P.Q. 323, 326 (C.C.P.A. 1981).

From the factual evidence as stated by the Examiner in the answer, it would not be “necessary” to interface all the parts into an integral working whole. Therefore, as taught, we find that it would not have been inherent in any of the reference teachings as asserted by the Examiner.

Alternatively, if the Examiner is relying upon obviousness for the prior art meeting this limitation, the Examiner has not set forth a convincing line of reasoning as to why the skilled artisan would have been motivated to modify the prior art systems as set forth by the Examiner. Since the Examiner has stated that none of the prior art references teach the “assembly structure database,” and the Examiner has asserted only that the “assembly structure database” would have been “necessary to interface all the parts into an integral working whole,” this statement is a merely a possible conclusion by the Examiner without any supporting line of reasoning. The Examiner has not provided any discussion as to the implementation of the prior art systems to the design of an object or objects that would have plural parts which would have been desirable to relate to in some manner during the design thereof.

For the above reason we reverse the rejection of claims 1-6 as set forth in the Examiner’s answer. Also, since the Examiner has not discussed the “assembly structure

Appeal No. 96-3323
Application 08/022,922

database“ in the rejection of claims 7-10 with the addition of the Bly reference, we reverse the rejection of claims 7-10 for the same deficiency found in the rejection of claims 1-6.

CONCLUSION

To summarize, the decision of the Examiner rejecting claims 1-10 under 35 U.S.C. § 103 is reversed.

REVERSED

JERRY SMITH)	
Administrative Patent Judge)	
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)	
)	BOARD OF PATENT
MICHAEL R. FLEMING)	APPEALS AND
Administrative Patent Judge)	INTERFERENCES
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Appeal No. 96-3323
Application 08/022,922

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