

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opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.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. 13

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte MARTA A. GALUGA and JAY A. GLASPY JR.

Appeal No. 96-4181
Application 08/139,664¹

ON BRIEF

Before THOMAS, KRASS and FLEMING, Administrative Patent Judges.

FLEMING, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the final rejection of claims 1, 3, 5 through 13 and 15 through 18. Claims 14 and 19 through 23 have been allowed. Claims 2 and 4 have been canceled.

¹ Application for patent filed October 22, 1993.

The invention relates to a method and apparatus for process control of robots with a flexible assembly system (FAS). More particularly, the invention relates to handling of error or defect information generated during the assembly of workpieces in a flexible assembly system (FAS). Appellants define flexible assembly on page 1 of the specification as the ability of an automated or robot system to assemble different parts into different assembled units. For example, at the beginning of the workday a robot may be configured to place and secure circuit boards into the chassis of personal computers. After completing a desired quantity of assemblies the robot may be instructed to assemble components for a paper path in a xerographic copier. Although the materials and tools are different, the work processes share similarities that can be modeled such that a unified architecture can be developed to satisfy all types of flexible robot assembly applications.

The independent claim 1 is reproduced as follows:

1. A flexible, workpiece assembly system for automatically performing operations on a plurality of similar workpieces located on a pallet, comprising:

a workcell for performing operations to modify at least one of said plurality of similar workpieces present on the pallet;

a cell controller in communication with said workdcell, for controlling the operation of said workcell in response to a set of preprogrammed requirements;

means, located at said workcell, for detecting a defect in the assembly of the plurality of similar workpieces and generating an error message indicative of the defect, the error message including a first signal identifying, by location on the pallet, one of the plurality of workpieces detected as having a defect and a second signal, associated with said first signal, to indicate a nature of the defect therefor; and

a bus for communicating the error message to said cell controller, so that said cell controller may initiate an appropriate response.

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The Examiner relies on the following reference:

Sakamoto	5,341,304	Aug. 23, 1994 (filed Aug. 27, 1993)
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Claims 1, 3, 5 through 13 and 15 through 18 stand rejected under 35 U.S.C. § 103 as being unpatentable over Sakamoto. Rather than reiterate the arguments of Appellants and the Examiner, reference is made to the brief and answer for the respective details thereof.

OPINION

We will not sustain the rejection of claims 1, 3, 5 through 13 and 15 through 18 under 35 U.S.C. § 103.

The Examiner has failed to set forth a *prima facie* case. It is the burden of the Examiner to establish why one having ordinary skill in the art would have been led to the claimed invention by the express teachings or suggestions found in the prior art, or by implications contained in such teachings or suggestions. *In re Sernaker*, 702 F.2d 989, 995, 217 USPQ 1, 6 (Fed. Cir. 1983). "Additionally, when determining obviousness, the claimed invention should be considered as a whole; there is no legally recognizable 'heart' of the invention." *Para-Ordnance Mfg. v. SGS Importers Int'l, Inc.*, 73 F.3d 1085, 1087, 37 USPQ2d 1237, 1239 (Fed. Cir. 1995), *cert. denied*, 117 S.Ct. 80 (1996) *citing W. L. Gore & Assocs., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1548, 220 USPQ 303, 309 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984).

Appellants argue on pages 13 through 16 of the brief that Sakamoto fails to teach or suggest a flexible workpiece assembly system having pallets containing more than one workpiece thereon nor the communication of an error message identifying the location of the defect along with the nature of the defect. We note that Appellants' claim 1 recites the following:

A flexible, workpiece assembly system for automatically performing operations on a plurality of similar workpieces located on a pallet, comprising: a workcell for performing operations to modify at least one of said plurality of similar workpieces present on the pallet; ... means ... for detecting a defect in the assembly of the plurality of similar workpieces and generating an error message indicative of the defect, the error message including a first signal identifying, by location on the pallet, one of the plurality of workpieces detected as having a defect and a second signal, associated with said first signal, to indicate a nature of the defect detected therefor....

We note that the only other independent claim, claim 11, is a method claim which recites similar limitations as above.

The Examiner states in the rejection that Sakamoto fails to teach assembling a plurality of similar workpieces on a pallet as recited in Appellants' claims 1 and 11. The Examiner argues on that it would have been obvious to those skilled in the art to modify the Sakamoto system to assemble more than one part at an assembly station to obtain Appellant's invention as recited in Appellants' claims 1 and 11.

We note that the Examiner has not addressed the limitation of having a means for detecting a defect in the assembly of the plurality of similar workpieces and generating an error message indicative of the

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defect, the error message including a first signal

identifying, by location on the pallet, one of the plurality of workpieces detected as having a defect and a second signal, associated with said first signal, to indicate a nature of the defect detected therefor. Furthermore, the Examiner has not pointed to any teaching or suggestion to modify Sakamoto as the Examiner has proposed.

We are not inclined to dispense with proof by evidence when the proposition at issue is not supported by a teaching in a prior art reference, common knowledge or capable of unquestionable demonstration. Our reviewing court requires this evidence in order to establish a *prima facie* case. *In re Knapp-Monarch Co.*, 296 F.2d 230, 232, 132 USPQ 6, 8 (CCPA 1961); *In re Cofer*, 354 F.2d 664, 668, 148 USPQ 268, 271-72 (CCPA 1966). The Federal Circuit states that "[t]he mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification." *In re Fritch*, 972 F.2d 1260, 1266 n.14, 23 USPQ2d 1780, 1783-84 n.14 (Fed. Cir. 1992), *citing In re Gordon*, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984). "Obviousness may not be established using hindsight or in view of the teachings or suggestions of the inventor." *Para-Ordnance Mfg.*, 73 F.3d at 1087, 37 USPQ2d at 1239, *citing W. L. Gore*, 721 F.2d at 1551, 1553, 220

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USPQ at 311, 312-13.

We have not sustained the rejection of claims 1, 3, 5 through 13 and 15 through 18 under 35 U.S.C. § 103. Accordingly, the Examiner's decision is reversed.

REVERSED

JAMES D. THOMAS)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
ERROL A. KRASS)	
Administrative Patent Judge)	APPEALS AND
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)	INTERFERENCES
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MICHAEL R. FLEMING)	
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