

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 16

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte HIROSHI NISHIYAMA, YOSHIKAZU SAITO, AKIYOSHI TOMITA,  
KATSUTOSHI NAKAJIMA, AKIRA NORIZUKI and KAZUYOSHI UNNO

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Appeal No. 2002-2151  
Application No. 09/342,234

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ON BRIEF

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Before ABRAMS, FRANKFORT, and STAAB, 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 through 10, all of the claims pending in this application.

Appellants' invention relates to an improvement for a vehicle network system and a method of controlling states of vehicle apparatuses in which plural slave apparatuses and a

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master apparatus are connected to a common transmission path, and the master sends commands through the transmission path to control states of the slave apparatuses. More particularly, appellants' system and method reduces or eliminates the burden on the master apparatus to monitor slave apparatuses for an abnormal state and then restore a slave apparatus from an abnormal state if such occurs, by having the master apparatus only periodically notify the slave apparatuses of the system state command and each of the slave apparatuses themselves provided with means whereby each slave apparatus recognizes, in response to the system state command, an abnormal state and then conducts by itself processing for restoring from an abnormal state. Independent claims 1 and 7 are representative of the subject matter on appeal, and a copy of those claims can be found in the Appendix to appellants' brief.

The prior art references of record relied upon by the examiner in rejecting the appealed claim are:

Weiss	6,038,500	Mar. 14, 2000
Iihoshi et al. (Iihoshi)	6,052,632	Apr. 18, 2000

Claims 1 through 10 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Weiss in view of Iihoshi.

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Rather than reiterate the examiner's statement of the above-noted rejection and the conflicting viewpoints advanced by the examiner and appellants regarding the rejection, we make reference to the final rejection (Paper No. 5, mailed March 9, 2001) and the examiner's answer (Paper No. 12, mailed March 28, 2002) for the reasoning in support of the rejection, and to appellants' brief (Paper No. 10, filed January 4, 2002) and reply brief (Paper No. 13, filed May 28, 2002) for the 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 references, and to the respective positions articulated by appellants and the examiner. As a consequence of our review, we have made the determination that the examiner's above-noted obviousness rejection will not be sustained. Our reasons follow.

As highlighted by appellants in their brief and reply brief, the central point of disagreement between appellants and the

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examiner in this appeal is whether or not Weiss discloses a determining device in each of the plurality of slave apparatuses for determining whether the current apparatus state stored in the memory of the slave apparatus coincides with the system state command that is periodically received from the master apparatus.

The Weiss patent discloses a computer/bus message system for a vehicle drive control system, wherein the drive control system includes a process computer (24) which includes parallel and independently operating function modules (26-36) for controlling specific vehicle functions based on inputs from operator controlled devices (10-20). The process computer (24) regularly transmits target value signals over the system bus (40) in the form of a combined message to controllers (50-64), such that each controller connected to the system bus basically "receives all communications and detects which parts of the communication are intended for it and evaluates these" (col. 3, lines 17-20). It is further noted that in case of a failure of signals the controller continues to operate with the information received previously. The individual controllers (50-64) control a respective actuator, e.g., the steering controller (52) controls the steering actuator (72), while the brake controller (58)

controls a brake (78). As indicated by the double arrows seen in Figures 1a and 1b, the system bus (40) is connected to the individual controllers (50-64), as well as the controllers (50-64) to their associated actuators, so that data and information can be exchanged in both directions.

When comparing appellants' claimed invention with Weiss (final rejection, page 2), the examiner analogizes the process computer (24) with appellants' claimed master apparatus, the combination of controllers (50, 52, 54, 56) and actuators (70, 72, 74, 76) to the claimed slave apparatuses, and the system bus (40) to appellants' claimed transmission path. What the examiner finds lacking in the system of Weiss is a memory in each of the slave apparatuses which stores a current apparatus state of the respective slave apparatus.

Iihoshi discloses a network system having a plurality of vehicle-mounted, microprocessor-based electronic devices each having a distributed operating system for performing data communication and distributed processes among the electronic devices. As noted in column 2 of the patent, by virtue of the distributed operating system contained in each of the vehicle-

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mounted electronic devices, information resources and hardware resources can be used in common by two or more of the electronic devices, and a given data item can be transmitted among the vehicle-mounted electronic devices with improved network transparency. The distributed operating system also improves the reliability of the network system and provides the system with a high level of scalability. Thus, Iihoshi makes it possible to build up virtual distributed shared memories when there is no physical shared memory provided (see, col. 2, lines 35-56). Although the system of Iihoshi is clearly not a network system having a master/slave relationship, the examiner urges that this patent discloses a memory (11, 21, 31, 41) "which stores a current apparatus state of the respective slave apparatuses" (final rejection, page 2).

In the rejection of claims 1 through 10 under 35 U.S.C. § 103(a), the examiner contends that it would have been obvious to one of ordinary skill in the art at the time of appellants' invention to use the memory of Iihoshi in the invention of Weiss "because there would have to be some type of storage for the message [from the process computer (24) of Weiss] otherwise the message would be transmitted and then just disappear and be

lost." The examiner rationalizes that the structure of controllers in the art almost always contain a microprocessor with an attached RAM to store the information that the processor is working on (final rejection, page 3).

After having reviewed both Weiss and Iihoshi, we must agree with appellants arguments in their brief and reply brief that there is no teaching or suggestion in either Weiss or Iihoshi, whether considered individually or collectively, of a vehicle network system having one master apparatus and a plurality of slave apparatuses connected to a common transmission path, wherein each of the slave apparatuses includes a memory which stores a current apparatus state of the respective slave apparatuses, a determining device for determining whether the current apparatus state stored in the memory of the slave apparatus coincides with the system state in the system state command received from the master apparatus, and an apparatus state changing device for making the current apparatus state stored in the memory of the slave apparatus coincident with the system state command when the determining device determines that the current apparatus state of the slave apparatus does not coincide with the system state in the system state command.

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Thus, even if we assume that each of the controllers (50-64) of Weiss includes a memory, or that it would have been obvious to one of ordinary skill in the art at the time of appellants' invention to modify the controllers of Weiss to have a memory, we fail to find in either of the applied patents any teaching or suggestion as to exactly what information would be stored in such memory, or of a "determining device" like that required in claim 1 on appeal for causing each of the slave apparatuses to determine whether the current apparatus state stored in the memory of the slave apparatus coincides with the system state in the system state command received from the master apparatus (claim 7).

It also follows from the deficiencies noted above that neither Weiss nor Iihoshi provides any teaching or suggestion of an apparatus state changing device "for making the current apparatus state stored in the memory of the slave apparatus coincident with the system state command when the determining device determines that the current apparatus state of the slave apparatus does not coincide with the system state in the system state command," as set forth in claim 1 and in similar language in method claim 7.

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While it is true that Weiss discloses that each of the controllers (50-64) therein "receives all communications and detects which parts of the communication are intended for it and evaluates these" (col. 3, lines 17-20), after having selected the appropriate portion or portions of the communication for it, we have no indication in Weiss as to exactly what further evaluation the controller performs. The examiner's conclusion in the rejection that the controllers of Weiss each include a "determining device" and an "apparatus state changing device" like those specifically set forth in claim 1 on appeal is clearly based on speculation and conjecture.

Since we have determined that the teachings and suggestions found collectively in Weiss and Iihoshi would not have made the subject matter as a whole of claims 1 through 10 on appeal obvious to one of ordinary skill in the art at the time of appellants' invention, we must refuse to sustain the examiner's rejection of those claims under 35 U.S. C. § 103(a).

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In accordance with the foregoing, the decision of the examiner rejecting claims 1 through 10 of the present application under 35 U.S.C. § 103(a) is reversed.

REVERSED

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

CEF/lbg

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SUGHRUE, MION, ZINN, MACPEAK  
& SEAS PLLC  
2100 PENNSYLVANIA AVENUE NW  
WASHINGTON, DC 20037-3200

# *Lesley*



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APJ FRANKFORT

APJ STAAB

APJ ABRAMS

DECISION: REVERSED

Prepared: March 8, 2005

Draft                  Final

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PALM / ACTS 2 / BOOK

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