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opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.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. 25

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

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Ex parte HOWARD T. OLNOWICH, MICHAEL W. DOTSON, JAMES W. FEENEY, MICHAEL H. FISHER, JOHN D. JABUSCH, ROBERT F. LUSCH and MICHAEL A. MANIGUET

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Appeal No.1997-0895
Application 08/286,107

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ON BRIEF

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Before KRASS, JERRY SMITH, and HECKER, Administrative Patent Judges.

HECKER, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the final

rejection of claims 26, 34 and 49 through 66, all claims pending in this application.

The invention relates to an adapter used in a computer network that converts and adapts a data message sent between a switch network, operating under a switch protocol, and a node (e.g., a personal computer), operating under a different protocol.

Representative independent claim 26 is reproduced as follows:

26. An adapter comprising:

transmission means for transmitting and for converting a data message sent between a switch network operating under a switch protocol and a node operating under a bus protocol that is different from the switch protocol, the switch protocol including a parallel data transmission format wherein a plurality of bits of the data message are transmitted in parallel, said node including:

a processor coupled to a bus, the bus including a plurality of bus lines; and

means for receiving and sending said data message over the bus;

said transmission means comprising:

a receive buffer for storing a complete data message sent from the switch network;

a send buffer for storing a complete data message sent from the node;

a switch interface, that has a distinct and separate protocol and composition from the bus, for coupling the adapter to the switch network; and

a bus interface for coupling the adapter to the bus.

The Examiner relies on the following reference:

Hedberg et al. 5,261,059 Nov. 9, 1993
(filed Jun. 29, 1990)

Claims 26, 34 and 49 through 66 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Hedberg[1].

Rather than reiterate the arguments of Appellants and the Examiner, reference is made to the brief, reply brief and answer[2] for the respective details thereof.

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[1] An amendment after final rejection has resulted in: (1) a secondary reference, Struger et al., has been dropped, (2) a rejection under 35 U.S.C. § 112, second paragraph, has been made moot, (3) the 35 U.S.C. § 103 rejection extends to added claims 61-66, see answer-page 2, brief-page 5, and the advisory action mailed Feb. 14, 1996.

[2] We are using the latest Answer, mailed March 15, 2000.

OPINION

After a careful review of the evidence before us, we will sustain the rejection of claims 26, 34 and 49 through 66 under 35 U.S.C. § 103.

At the outset, we note that Appellants have indicated on page 3 of the brief the claims stand or fall together. Accordingly, we will select claim 26 as the representative claim in accordance with 37 CFR § 1.192(c)(7), effective at the time the brief was filed.

The Examiner has 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 reasonable teachings or suggestions found in the prior art, or by a reasonable inference to the artisan contained in such teachings or suggestions. ***In re Sernaker***, 702 F.2d 989, 995, 217 USPQ 1, 6 (Fed. Cir. 1983).

The Examiner reasons that Hedberg teaches the claimed invention, except that it does not expressly state

that the switch interface has a distinct and separate composition from the bus of the node. However, the Examiner contends:

> The switch interface coupled to the crossbar switch in Hedberg et al using fiber optic connections would have a composition distinct and separate from the bus interface coupled to the host computer using cable connections. Hence, the switch interface would have a composition distinct and separate from the bus of the host computer, even under the circumstance that the composition of the bus of the host computer is made identical to the composition of the bus interface coupled to it. (Answer-pages 5 and 6.)[3]

Appellants argue "The present invention is a hardware approach that is easy to implement and does not require processor control and special software as Hedberg does (see col. 5, line 10 of Hedberg)." (Brief-page 5.)

This argument fails at the outset because it is not based on limitations appearing in the claims. Thus, Hedberg's argued use of processor control and special software are

[3] With respect to the fiber optic connections we note Hedberg, column 4, lines 17 and 18.

immaterial since they are not prohibited by the claim language. See ***In re Self***, 671 F.2d 1344, 1350, 213 USPQ 1, 5 ((CCPA 1982).

Appellants argue "Thus in Hedberg et al all four data paths EITHER employ the HIPPI protocol and are parallel wire cable connectors OR they are fiber optic cables." (Reply brief-page 3.)

A look at Hedberg reveals the following language:

> While the example embodiment is based upon 32-bit data paths employing parallel **wire cable connectors for the paths** 15-18, ***a*** **fibre optic connection** could also be used. (Column 4, lines 15-18.) (Emphasis added.)

We find that this language does not require **all four** paths to be EITHER wire cable OR fiber optic as articulated by Appellants. Nor, on the other hand, does the cited language suggest two paths be wire cable and the other two paths be fiber optic, as proffered by the Examiner. If the Examiner's position were specifically recited in Hedberg, we would have a situation of anticipation as opposed to obviousness. We find that Hedberg does suggest some variation in material (i.e., composition) of the connecting paths. And, we agree with the

Examiner that it would have been obvious to one of ordinary skill in the art at the time of invention to have two wire cable paths linked through an adapter to two fiber optic paths. Such a conclusion is clearly laudable when one considers that even those not skilled in the art realize a telephone, which uses a wire cable path, is commonly linked to other telephones through an intervening fiber optic path.

Appellants argue that the interfaces and the protocols of Hedberg are the same. Appellants state:

> Hedberg refers to the four paths (15 to 18) in Figure 2 (the four paths are the interfaces in and out of the computer, and in and out of the switch) as the same and complying to the High Performance Parallel Interface ("HIPPI") standard (see col. 4, lines 4-9....Everything shown in Hedberg confirms that the interfaces are the same, use HIPPI protocol, and have the same data and control signals as shown in Figure 2. Any interface controlled by identical hardware, conforming to the same standard, and comprised of the same interface lines, must communicate by the same protocol. (Brief-pages 5 and 6.)

The Examiner responds:

> The scope of a protocol used by an interface is not bound by the communications interface standard adopted by the data path in the

> interface (such as HIPPI)(col. 1, lines 42 and 53). It is not necessary that the two interfaces use the same protocol, just because they adopt the same communications interface standard....A protocol comprises many layers of hand-shake commands and responses....
>
> An interface encompasses more than the physical signal lines. An interface includes all the elements and functions required for coupling two units....
>
> The crossbar interface in Hedberg et al off-loads all communications-related functions from the host computer (col. 2, lines 8, 28-31, and 46-48). The format of the information transferred from the host computer to the crossbar interface (col. 5, lines 21 and 22) and the format of the information transferred from the crossbar interface to the crossbar switch (col. 3, line 58; col. 5, lines 22-24) are different (col.5, line 21). To accommodate two different formats of information, two different protocols are used. (Answer-pages 7 and 8.)

We agree with the Examiner. Although the physical structure discussed with respect to Hedberg is the same on both sides of the crossbar interface (i.e., adapter), this does not require the protocols to be the same. As noted supra, the

programmable platform and software of Hedberg accommodates the differences or different layers in protocol. As recited in

Hedberg:

> The software run by the host computer needs minimal changes to adapt to the network. Routing, connections, synchronization, network management and **network protocol processing** are handled by the crossbar interface 11 or 12 rather than by the host. Communications between crossbar interfaces 11 and 12 are handled by **sub-network protocols** running among crossbar interfaces; the host computers 13 and 14 do not directly participate in sub-network transmissions. Standard **host** network **protocols** and messages communicate "on top of" the underlying network provided by the crossbar interfaces and crossbar switch. Applications and network layers running on the host computers communicate with their peer layers running on other hosts within the network, unaware of the activity of the crossbar interfaces and crossbar switching. (Column 5, lines 13-28.) (Emphasis added.)

As pointed out above, Hedberg teaches the obviousness of using components of different composition (e.g., fiber optic), and uses different protocols, or at least protocol layers. Thus, we will sustain the Examiner's rejection of claim 26. Likewise, since all claims stand or fall together, we will sustain the Examiner's rejection of claims 34 and 49 through 66.

In view of the foregoing, the decision of the Examiner rejecting claims 26, 34 and 49 through 66 under 35

U.S.C. § 103 is affirmed.

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

AFFIRMED

ERROL A. KRASS Administrative Patent Judge	)
JERRY SMITH Administrative Patent Judge	) BOARD OF PATENT) APPEALS AND) INTERFERENCES
STUART N. HECKER Administrative Patent Judge	)

SNH:pgg
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