

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opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.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. 22

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte JAMES L. ASHTON,
WILLIAM N. MADDOX, KARL D. McCORMICK II,
ROBERT D. PORTER, DIVKARA K.R. UDUPA,
and ROBERT T. UTHE

Appeal No. 1997-0809
Application 08/033,599¹

ON BRIEF

Before HAIRSTON, BARRETT, and HECKER, Administrative Patent Judges.

BARRETT, Administrative Patent Judge.

DECISION ON APPEAL

¹ Application for patent filed March 19, 1993, entitled "Management Of Packet Transmission Networks."

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This is a decision on appeal under 35 U.S.C. § 134 from the Examiner's refusal to allow of claims 1, 3-9, 12, and 13. The rejection of claims 10 and 11 has been withdrawn (Examiner's Answer, page 2) and presumably these claims stand objected to.

We affirm-in-part.

BACKGROUND

The disclosed invention is directed to the management of packet transmission networks.

Claim 9 is reproduced below.

9. A network management system for a packet communications network having a plurality of packet switching nodes connected by a plurality of data links represented by virtual circuit segments comprising

means for generating management information in frames suitable for transmission on the packet communications network,

said frames comprising major vectors associated with particular types of management information and including a plurality of subvectors containing specific information about the status and configuration of virtual circuit segments, and

means responsive to said management information for managing said packet communications network.

The Examiner relies on the following prior art patents:

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|--------------------------------|-----------|--------------------|---|
| Jolissaint et al. (Jolissaint) | 5,276,440 | January 4, 1994 | |
| | | | (filed May 6, 1991) |
| Dev et al. (Dev) | 5,504,921 | April 2, 1996 | |
| | | | (effective filing date September 17, 1990) |

Claims 9, 12, and 13 stand rejected under 35 U.S.C. § 102(e) as being clearly anticipated by Jolissaint.

Claims 5-8 stand rejected under 35 U.S.C. § 103 as being unpatentable over Jolissaint.

Claims 1, 3, and 4 stand rejected under 35 U.S.C. § 103 as being unpatentable over Jolissaint and Dev. This is a new ground of rejection entered in the Examiner's Answer.

We refer to the Final Rejection (Paper No. 10), the Examiner's Answer (Paper No. 19) (pages referred to as "EA__"), and the Supplemental Examiner's Answer (Paper No. 21) (pages referred to as "SEA__") for a statement of the Examiner's position. We refer to the substitute Appeal Brief filed January 26, 1996 (Paper No. 18) (pages referred to as "Br__") and the Reply Brief (Paper No. 20) (pages referred to as "RBr__") for a statement of Appellants' arguments thereagainst.

OPINION

35 U.S.C. § 102(e)

"Anticipation is established only when a single prior art reference discloses, expressly or under principles of inherency, each and every element of a claimed invention." RCA Corp. v. Applied Digital Data Systems, Inc., 730 F.2d 1440, 1444, 221 USPQ 385, 388 (Fed. Cir. 1984).

We address only the limitations that are argued. See 37 CFR § 1.192(c)(8)(iii) (1995) (the argument shall specify the errors "including any specific limitations in the rejected claims which are not described in the prior art relied upon in the rejection"). Thus, although we find no express mention in Jolissaint of the terms "packet switching nodes," "frames," "major vectors . . . including a plurality of subvectors," or "virtual circuit segments," these limitations are not argued in connection with the anticipation rejection and are not addressed. Cf. In re Baxter Travenol Labs., 952 F.2d 388, 391, 21 USPQ2d 1281, 1285 (Fed. Cir. 1991) ("It is not the function of this court to examine the claims in greater detail than argued by an appellant, looking for nonobvious distinctions over the

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prior art."); In re Wiseman, 596 F.2d 1019, 1022, 201 USPQ 658, 661 (CCPA 1979) (arguments must first be presented to the Board before they can be argued on appeal).

Claim 9

With respect to claim 9, Appellants argue (Br10):

"There is no teaching or suggestion in Jolissaint of a means for managing a communications network responsive to management information regarding status and configuration of virtual circuits contained in a plurality of subvectors."

We note that claim 9 recites "means responsive to said management information for managing said packet

communications network" (emphasis added), not means

"responsive to management information regarding status and configuration," as argued. While the management information

may include specific information about the status and

configuration, it is not positively recited that the means

for managing is responsive to the status and configuration

information; i.e., it could be responsive to other types of

management information. Nevertheless, the information in

Jolissaint is considered information regarding status and

configuration.

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Appellants argue (Br1): "Jolissaint states that 'the network manager often accepts error reports when malfunctions occur in devices attached to the network, and provides a centralized location where a person responsible for network operation may monitor the state of the network' (column 1, line 66 - column 2, line 2). Therefore, human intervention is necessary using the teachings of Jolissaint."

The Examiner responds that Jolissaint teaches that the network manager is a general purpose computer system programmed to perform network manager functions and points to some of the managing functions which do not imply human intervention (EA11). The Examiner further notes that the claim language does not exclude human intervention.

We agree with the Examiner's reasoning. The network manager functions are performed by the network manager computer 30 (col. 3, line 66 to col. 4, line 1), not a human. In addition, claim 9 does not recite what "managing said packet communications network" consists of; this could be the functions performed by network manager 30 or it could be preparation of a report for a human manager.

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Appellants argue that other teachings of Jolissaint do not teach managing the network based on information regarding status and configuration of virtual circuits (Br10).

The Examiner points to column 7, lines 47-52, which describes that the network manager traces good direct links to identify the error, and to column 9, lines 18-20, which describes that the network manager can allocate the network load based upon its knowledge of device and interconnection capabilities, as evidence of network managing functions (EA4).

We agree with the Examiner's reasoning. No specific management functions are recited and any management function will do; the Examiner has pointed to two examples. In addition to the portions of Jolissaint noted by the Examiner, Jolissaint discloses that "[a] network manager may monitor traffic on the network, and may be able to control or influence message routing in some networks" (col. 1, lines 63-66). The function of the network manager in Jolissaint manifestly must be to manage the network. Note again that claim 9 recites that the means for managing is

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"responsive to said management information," not to the specific information about the status and configuration of virtual circuit segments.

Appellants have not shown any error in the Examiner's finding of anticipation. The anticipation rejection of claim 9 is sustained.

Claim 12

With respect to claim 12, Appellants argue (Br11) that Jolissaint does not teach "means at each node of said packet communications system for indicating the status and configuration of the virtual circuit segments terminating at said each node," but does not offer any explanation.

The Examiner states that "appellant's attention is directed to col. 4, lines 35-42, col. 6, lines 4-18, where Jolissaint teaches that each node generates reports indicating the status and configuration of links terminated at the nodes" (EA11). We agree that each node has means for indicating the initialization status and configuration of circuit segments terminating at the node. Appellants have not shown otherwise. Claim 12 does not require that the "means . . . for indicating" be anything other than a

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storing the status and configuration; it does not require a local management process at the node as shown in Appellants' figure 2 or a display. In addition, Jolissaint discloses that a local copy of the connectivity report is preferably retained (col. 8, lines 20-30).

Appellants further argue (Br11) that Jolissaint does not teach "programmed means . . . for analyzing said status and configuration data and for managing said packet communications system in response thereto."

The Examiner refers (EA11) to column 3, lines 22-25, column 7, lines 41-44, and column 9, lines 43-50. We agree with the Examiner that Jolissaint teaches managing network communications in response to status and configuration data. The network manager 30 collects connectivity information as shown in figure 1, which corresponds to configuration and initialization status data (i.e., the status of the direct links, col. 6, lines 21-22), and collects error reports or alerts as shown in figure 3, which corresponds to status data. We also refer to our discussion of claim 9 which relies on column 7, lines 47-52, and column 9, lines 18-20.

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Appellants have not shown any error in the Examiner's finding of anticipation. The anticipation rejection of claim 12 is sustained.

Claim 13

Appellants argue that Jolissaint does not disclose the claimed "means for generating a network management major vector of status and configuration data specifying the configuration and status of each virtual circuit segment terminating at said each node" or the claimed "means, responsive to inconsistencies originated at said adjacent ones of said nodes, for reporting said inconsistencies to said centrally located means for collecting data."

Appellants do not explain why Jolissaint does not meet these limitations.

The Examiner responds that Jolissaint teaches that each node generates reports (col. 5, line 6 to col. 6, line 16) and that the node also reports errors (col. 7, lines 31-36).

Jolissaint discloses that connectivity reports are sent via packets to the network manager 30. Such connectivity reports can broadly be considered to specify the configuration and the initialization status of the logical

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links because each of the 2-tuples (e.g., N1:N3 from node 1 in figure 1) indicates both the network configuration and the initialization status (connected) (col. 6, lines 21-22, refers to the status of the direct links). Note that claim 13 does not require the "current status" as in claim 1. We are reluctant to find that the connectivity reports sent in a packet are not a network management major vector absent some definition of that term in the claim or some argument by Appellants.

Jolissaint appears to meet the broad limitation of "means, responsive to inconsistencies between said status and configuration data originated at said adjacent ones of said nodes, for reporting said inconsistencies to said centrally located means for collecting data." A node in Jolissaint sends an error report to the network manager 30 after it senses that communication is no longer possible over a link. That is, a node senses an "inconsistency" between the initial status and configuration information at the node (e.g., that there is a logical connection between node 3 and node 4) and the actual status (i.e., unable to

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communicate). This "inconsistency" is reported to the network manager 30.

For these reasons, Appellants have not shown any error in the Examiner's finding of anticipation. The anticipation rejection of claim 13 is sustained.

Obviousness

We find the references to be representative of the level of ordinary skill in the art. See In re Oelrich, 579 F.2d 86, 91, 198 USPQ 210, 214 (CCPA 1978) ("the PTO usually must evaluate both the scope and content of the prior art and the level of ordinary skill solely on the cold words of the literature"); In re GPAC Inc., 57 F.3d 1573, 1579, 35 USPQ2d 1116, 1121 (Fed. Cir. 1995) (the Board did not err in adopting the approach that the level of skill in the art was best determined by the references of record). Obviousness is determined through the eyes of one of ordinary skill in the art and one of ordinary skill in the art must be presumed to know something about the art apart from what the references expressly disclose. See In re Jacoby, 309 F.2d 513, 516, 135 USPQ 317, 319 (CCPA 1962); In re Oetiker, 977 F.2d 1443, 1447-48,

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24 USPQ2d 1443, 1446-47 (Fed. Cir. 1992) (Nies, C.J.,
concurring).

Claims 5-8

Claim 5 recites an automated means for representing status comprising means for indicating a virtual circuit which is supported, means for indicating a virtual circuit segment which is not supported, and means for indicating a virtual circuit segment which is in use but which is indicated as being inactive. This is described with respect to the "U" and "F" bits on page 21 of the specification. Appellants argue that Jolissaint does not suggest these limitations or that the records being sent to the network manager include information on which links are being used (Br15).

The Examiner admits that Jolissaint does not disclose means for indicating that a segment is in use and is inactive, but concludes that this would have been obvious because when node 4 fails, it will not be able to generate an error report, and the network manager 30 will see link 24 being in use by node 3 and inactive by node 4 (EA6-7).

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We conclude that Jolissaint does not disclose or suggest means for indicating that a connection is in use but which is indicated as being inactive in a node adjacent to said node. Jolissaint indicates the physical or logical connection, not whether the connection is in use. Jolissaint does not indicate that a connection is in use, but is indicated to be inactive. The Examiner's interpretation of Jolissaint does not fairly meet the specific claim limitations. Therefore, we conclude that the Examiner has failed to establish a prima facie case of obviousness with respect to claim 5. The rejection of claims 5-8 is reversed.

Claims 1, 3, and 4

Claim 1 requires "means for storing the current status of said virtual circuit segments and the configuration of said interconnections."

Appellants argue that Jolissaint identifies physical connections in the network and "[t]here is no teaching or suggestion in Jolissaint to report the status of virtual circuit segments ..." (RBr3).

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The Examiner responds that Jolissaint generates and transmits reports of the status of logical links, which are considered to be the same as virtual circuits (SEA2). In connection with the rejection of claim 5, the Examiner admits that Jolissaint does not teach that the network manager indicates the status of the links, but concludes that the status is determined by the network manager in response to an error condition (EA7).

Claim 1 requires storing the "current status of the virtual circuit segments." Jolissaint determines the status of a direct link each time a direct link is initialized, but thereafter the change in status must be determined from analysis of the error reports. We agree with Appellants that Jolissaint does not report the current status of the links and we disagree with the Examiner's reasoning that the fact that the network manager can determine the status of a link in response to an error report meets the requirement for indicating the current status of virtual circuit segments. Dev is relied on for teaching of displaying network information and does not cure this deficiency. Thus, we conclude that the Examiner has failed to establish

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a prima facie case of obviousness. The rejection of claims
1, 3, and 4 is reversed.

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CONCLUSION

The rejection of claims 9, 12, and 13 is sustained.

The rejections of claims 1 and 3-8 are reversed.

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

AFFIRMED-IN-PART

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| | KENNETH W. HAIRSTON |) | |
| | Administrative Patent Judge |) | |
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| | LEE E. BARRETT |) | APPEALS |
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