

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* DIGI INTERNATIONAL INC.

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Appeal 2008-5025  
Reexamination Control 90/007,001  
United States Patent 6,047,319  
Technology Center 3900

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Decided: December 30, 2008

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Before ROMULO H. DELMENDO, SCOTT R. BOALICK and  
KEVIN F. TURNER, *Administrative Patent Judges*.

TURNER, *Administrative Patent Judge*.

DECISION ON APPEAL

Patent Owner (Appellant) appeals under 35 U.S.C. §§ 134(b) and 306 from a final rejection of claims 1-5, 8-15, 19, 21, 23, and 26 (Appeal Brief filed December 27, 2005, hereinafter “Br.”; Final Office Action mailed August 12, 2005). We have jurisdiction under 35 U.S.C. §§ 134(b) and 306.

We REVERSE.



A terminal server (20) is connected to a host computer across a general purpose network (10), such that ports (40) of the server are emulated through corresponding local ports such that application programs executing on the host computer are granted full control of the communications ports of the server as if those ports were local to the host computer. (Col. 5, l. 46 – col. 6, l. 23; col. 14, ll. 18-26). This is accomplished through a driver which includes an application programming interface (API) and redirects “data sent to a port of the server to an application program, or client, executing on the host computer with the result that the client is unaware of the existence of the network.” (Br. 7).

Claim 1 on appeal reads as follows:

1. A system comprising:
  - a server having a plurality of communication port; and
  - a host computer having a driver communicatively coupling the host computer to the server via a network connection, wherein the driver emulates the communication ports of the server by defining a corresponding local communication port for each of the communications ports of the server, and further wherein the driver includes an application programming interface (API) by which an application program executing on the host computer is granted full control of one of the communication ports of the server, including hardware and software flow control, as if the communications ports of the server were local to the host computer.

The prior art reference relied upon to reject the claims on appeal is:

Kunz	5,280,586	Jan. 18, 1994
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The Examiner rejected claims 1-5, 8-15, 19, 21, 23, and 26 under 35 U.S.C. § 102(e) as anticipated by Kunz, as reiterated in the Examiner’s

Answer, hereinafter “Ans.,” at pages 4-11. Prior rejections of the claims have been withdrawn by the Examiner in an Advisory Action mailed December 12, 2005, where claims 6, 7, 16 and 17 were confirmed and claims 18, 20, 22, 24, and 25 were objected to as depending from rejected base claims but containing allowable subject matter.

While Appellant has indicated that claims should be grouped in five groups, (Br. 5), we find such groupings to be unnecessary and find claim 1 to be representative of all of the rejected claims. *See* 37 C.F.R. § 41.37(c)(1)(vii).

The Examiner’s position is that Kunz discloses all of the elements of claim 1 to render the claim anticipated. (Ans. 4-11). Appellant, on the other hand, contends that Kunz does not disclose 1) a server, 2) a network, 3) a driver that emulates the communication ports of the server by defining a corresponding local communication port for each of the communications ports of the server, nor 4) an API by which an application program executing on the host computer is granted full control of one of the communication ports of the server, including hardware and software flow control, as if the communications ports of the server were local to the host computer, as recited in claim 1.

## ISSUES

Thus, the issue arising from the contentions of the Examiner and Appellant is:

Did the Examiner err in concluding that Kunz discloses a server, a network, a driver and an API as recited in claim 1 such that Kunz anticipates the subject matter of claim 1?

### FINDINGS OF FACT

1. The '319 Patent discusses a prior art port concentrator as follows (col. 1, ll. 29-46):

[M]ultiplexors have been utilized to combined serial traffic from numerous, internally referenced serial ports into a single communication channel. In this way, only one communication cable needs to be attached to the computer. On the other end of the communication cable is another multiplexing device, which separates the combined data traffic into data for individual serial ports, and then provides the serial ports through which this data can be accessed. This type of multiplexing device, called a ports concentrator, can be used to provide multiple serial ports for terminals in a location remote from the computer.

2. The '319 Patent describes a general purpose network (col. 1, ll. 61-66):

A general purpose network is a communication system utilizing standard hardware and standard communication protocols, and operating in a multi-vendor environment. General purpose network hardware includes LAN technologies like Ethernet and Token Ring.

3. The '319 Patent states (col. 5, ll. 39-45):

A server 20 of the present invention operates to connect various ports (not shown) to the network 10. Communication lines 22 can be connected to the ports on the server 20. Although only five communication lines 22 are shown in FIG. 1, the server 20 typically has sixteen or more ports which can be connected to the network 10.

4. Kunz is directed to a communication system having host adapters with multiple serial ports for transferring data between the host computer and several TTY devices. (Abstract).
5. Kunz discloses that the communications system includes hardware and an associated communications protocol that affords efficient and equitable communication between remote devices and a central device, and that is economical to implement even when remote devices are located relatively far from the host. (Col. 3, ll. 9-15).
6. Kunz discusses remote or “peripheral” devices which include devices such as user terminals, printers, modems, data storage devices, data acquisition devices, and the like, must frequently exchange information with a central processing unit. (Col. 1, ll. 43-46).
7. Kunz describes connections between the host CPU (10) and the remotes devices (12, 14) through use of a host adaptor (18’) and a data concentrator (28) through system bus or data link (20) and serial links (22, 30). (Col. 6, ll. 30-47; col. 7, ll. 21-46; Fig. 2).
8. Kunz discloses that the data concentrator provides a facility for communications with up to eight asynchronous devices via a single high-speed full duplex data link. (Col. 36, ll. 61-64).

#### PRINCIPLES OF LAW

It is axiomatic that anticipation of a claim under § 102 can be found if the prior art reference discloses every element of the claim. *See In re King*,

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801 F.2d 1324, 1326 (Fed. Cir. 1986) and *Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 1458 (Fed. Cir. 1984). In rejecting claims under 35 U.S.C. § 102, a single prior art reference that discloses, either expressly or inherently, each limitation of a claim invalidates that claim by anticipation. *Perricone v. Medicis Pharmaceutical Corp.*, 432 F.3d 1368, 1375-76 (Fed. Cir. 2005), citing *3M Co. v. Johnson & Johnson Orthopaedics, Inc.*, 976 F.2d 1559, 1565 (Fed. Cir. 1992).

It is well settled that the United States Patent and Trademark Office (PTO) is obligated to give claim terms their broadest reasonable interpretation, taking into account any enlightenment by way of definitions or otherwise found in the specification. *In re Icon Health and Fitness, Inc.*, 496 F.3d 1374, 1379 (Fed. Cir. 2007) (“[T]he PTO must give claims their broadest reasonable construction consistent with the specification . . . Therefore, we look to the specification to see if it provides a definition for claim terms, but otherwise apply a broad interpretation.”).

## ANALYSIS

Appellant argues that Kunz fails to teach or suggest a “server” as described in the Specification of the ‘319 Patent and recited in the independent claims. (Br. 9). Appellant points out that the element of Kunz relied upon as teaching a server is a data concentrator that is equivalent to the port concentrators discussed in the Background of the Invention section of the ‘319 Patent. (FF. 1). Appellant argues that such a data concentrator is not the same as a server, as that term is used in the Specification of the ‘319 Patent and how that term is generally defined in the art. (Br. 9-11).

The Examiner responds that the server illustrated in Fig. 2 of the '319 Patent comprises a CPU, a network interface, program memory and a plurality of communication ports, and that the data concentrator comprises those elements as well. (Ans. 11-12). The Examiner concludes that "based on the definition of a server in Olson ['319 Patent], the concentrator in Kunz is an equivalent to the server in Olson." (Ans. 12). We cannot agree.

The term "server" is not explicitly defined in the '319 Patent, but we agree with Appellant that its description is distinguishable from the port concentrator, as described therein. (FF. 1 and 3). The data concentrator described in Kunz, (FF. 8), shares more characteristics with the port concentrator described in the '319 Patent than with a "server," as that term is generally understood. In addition, we cannot agree with the Examiner's process of finding equivalence; many different devices could have all the constituent components that make up the specific embodiment of a server in the '319 Patent and not be servers. For example, a standard personal computer could have all of the elements listed by the Examiner, but without the proper software resident, it would not be understood to be a server. As such, we find that Kunz fails to disclose a server as recited in claim 1.

Appellant argues that Kunz fails to disclose a network or a network connection as recited in the claims, where Kunz is argued to merely disclose a connection to the data connector that is a serial link and is not a network. (Br. 11-12). The Examiner responds that the establishment of communications between the host CPU and some number of remote devices in Kunz is equivalent to the network recited in the claims. (Ans. 12-14). We cannot agree.

The Examiner recites the definition of a general purpose network, (FF. 2; Ans. 12), but does not appear to accept that definition. Though the host adaptor may communicate with the data concentrator via RS-422 line drivers, using a standard communication protocol, a signaling protocol does not, by itself, constitute a network. In other words a network without communication protocols would not be a network, but a communication protocol alone does not require a network, as the term is defined in the context of the '319 Patent. A peripheral device may utilize that protocol to receive signals from a personal computer without the two devices forming a network that allows interactive communication and operation within a multi-vendor environment. As disclosed in Kunz, the connection between the host CPU and the remotes devices incorporates serial links and does not necessarily require a network connection. (FF. 7). In addition, the types of devices that are interconnected are peripheral devices, (FF. 6), which do not require a "general purpose network" as defined and claimed in the '319 Patent. As such, we find that Kunz fails to disclose a network connection as recited in claim 1.

Appellant additionally argues that Kunz fails to disclose a driver and an API, which are elements recited in claim 1, (Br. 13-15), but we need not address those arguments in view of the deficiencies of the rejection already found. As such, we find the rejection of claims 1-5, 8-15, 19, 21, 23, and 26 to be improper.

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### CONCLUSION

On this record, we determine that Appellant has demonstrated that the Examiner erred in rejecting claims 1-5, 8-15, 19, 21, 23, and 26 as being anticipated by Kunz under 35 U.S.C. § 102(e).

### DECISION

The Examiner's decision to reject appealed claims 1-5, 8-15, 19, 21, 23, and 26 is reversed.

### REVERSED

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