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

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte PAPARAO PALACHARLA, HOK YONG PUA,
EMIR CATOVIC, and HARBHAJAN VIRDEE

Appeal 2007-1287
Application 10/161,274
Technology Center 2600

Decided: June 1, 2007

Before JOSEPH L. DIXON, ROBERT E. NAPPI, and ST. JOHN COURTENAY III, *Administrative Patent Judges*.

NAPPI, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134 of the final rejection of claims 1 through 6, and 9 through 24. For the reasons stated *infra*, we affirm-in-part the Examiner's rejection of these claims.

INVENTION

The invention is directed to optical communication networks. The invention relates to providing information as to which channels in an optical signal are active. See page 3 of Appellants' Specification. Claim 1 is representative of the invention and reproduced below:

> 1. A method for optical supervisory signaling, comprising:
> determining, for each one of a plurality of data channels serviced by a first optical communication node:
> a wavelength channel status value indicating whether the channel has been provisioned;
> a wavelength channel failure value indicating whether a failure has been detected on the channel; and
> a wavelength channel lit value indicating whether the channel is active; and communicating the wavelength channel status value, the wavelength channel failure value, and the wavelength channel lit value to a second optical communication node.

REFERENCES

The references relied upon by the Examiner are:

Beine	US 6,304,347 B1	Oct. 16, 2001
Lauder	US 2004/0071392 A1	Apr. 15, 2004 (filed Nov. 27, 2001)

REJECTIONS AT ISSUE

Claim 1 through 5, and 9 through 24[1] stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Beine. The Examiner's rejection is set forth on pages 2 through 5 of the final Office action dated January 10, 2006. Claim 6 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Beine in view of Lauder. The Examiner's rejection is set forth on page 5 of the final Office action dated January 10, 2006. Throughout the opinion we make reference to the Brief and Reply Brief (filed June 16, 2006 and Oct. 12, 2006 respectively), and the Answer (mailed Sept. 21, 2006) for the respective details thereof.

ISSUES

Appellants contend that the Examiner's obviousness rejection of claims 1 through 5, and 9 through 24 is in error. Appellants assert that the Examiner's analogy of the claimed wavelength lit value with Beine's reporting of a wavelength failure is improper. (Br. 12). Further, Appellants argue that the claims recite a value indicating that a channel has been provisioned, whether a failure has been detected and whether a channel is lit, and the Examiner's rejection lumps these three different limitations together without showing that Beine teaches each separate limitation. (Br. 12 and Reply Br. p. 2).

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[1] We note that the final Office action inadvertently identifies canceled claims 7 and 8 as also being included in the rejection. The Examiner acknowledged this oversight on page 3 of the Answer.

The Examiner contends that the rejection is proper. The Examiner finds that:

> [W]hile Beine has not shown the explicit teaching of a wavelength as "lit" or not, it is believed that the document is replete with inferences that point to both the separate teaching "wavelength channel status values" and "wavelength channel lit values."

(Examiner's Answer 5).

Appellants' contentions present us with two issues the first issue is whether Beine teaches or make obvious a wavelength lit value indicating whether the wavelength channel is active and the second issue is whether Beine also teaches separate values indicating that the channel has been provisioned, whether a failure has been detected and whether the wavelength channel is lit.

FINDINGS OF FACT

1. Appellants' originally filed Specification states on page 7:

> A particular channel is said to be "lit" or "active" when light of the appropriate wavelength 108 appears on the channel, but it should be understood that the light need not be sustained in order for the channel to be "lit." Instead, "lit" refers to light of a particular wavelength 108 appearing in signal 104 within a particular period, whether the light itself is sustained, intermittent, or even sporadic.

2. Appellants' originally filed Specification states on page 8, the "wavelength channel lit value (WLC) that indicates whether there is light present on the channel regardless of whether the channel has been provisioned or whether there has been a failure on the channel."

3. Beine teaches a system for managing signal power levels in an optical network. (See Abstract).
4. Beine teaches that each network element contains a wavelength management unit. (Col. 23, ll. 27-30).
5. The wavelength information tracked by the wavelength management unit includes the number and type of wavelengths (channels) that are included in the input signal received. This information is communicated to elements within the network element. (Beine col. 23, ll. 34-37).
6. These wavelength management units also signal the peer wavelength management elements with changes in wavelength status. (i.e. the network elements communicate the wavelength status amongst each other). (Beine col. 23, ll. 46-48).
7. The wavelength status signaling among units is to notify network elements of a loss of signal at a destination, or the source has failed, or has been turned off. (Beine col. 23, ll. 53-55).
8. The wavelength manager is responsible for signaling when wavelengths are added or dropped. (Beine col. 23, ll. 57-58).
9. The power output or attenuation of the variable output attenuators (VOA) is adjusted based in part upon the number of channels of information. (Beine col. 23, ll. 14-19).
10. One of the triggering events to adjust the output level of the VOA is a sudden change in input power to the VOA. This triggers open loop control until updated information about the number of channels is available.

PRINCIPLES OF LAW

Office personnel must rely on Appellants' disclosure to properly determine the meaning of the terms used in the claims. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 980, 34 USPQ2d 1321, 1330 (Fed. Cir. 1995). "[I]nterpreting what is *meant* by a word *in* a claim 'is not to be confused with adding an extraneous limitation appearing in the specification, which is improper.'" *In re Cruciferous Sprout Litigation*, 301 F.3d 1343, 1348, 64 USPQ2d 1202, 1205, (Fed. Cir. 2002) (emphasis in original) (citing *Intervet Am., Inc. v. Kee-Vet Labs., Inc.*, 887 F.2d 1050, 1053, 12 USPQ2d 1474, 1476 (Fed.Cir.1989)).

The categories of statutory subject matter are "process, machine, manufacture, or composition of matter." 35 U.S.C. § 101. "[N]o patent is available for a discovery, however useful, novel, and nonobvious, unless it falls within one of the express categories of patentable subject matter of 35 U.S.C. § 101." *Kewanee Oil Co. v. Bicron Corp.*, 416 U.S. 470, 483, 181 USPQ 673, 679 (1974).

The three product classes of machine, manufacture, and composition of matter have traditionally required physical structure or substance. "The term machine includes every mechanical device or combination of mechanical powers and devices to perform some function and produce a certain effect or result." *Corning v. Burden*, 56 U.S. 252, 267 (1854); *see also Burr v. Duryee*, 68 U.S. 531, 570 (1863) (a machine is a <u>concrete</u> thing, consisting of parts or of certain devices and combinations of devices). In modern parlance, electrical circuits and devices, such as computers, are referred to as machines.

A "manufacture" and a "composition of matter" are defined in *Diamond v. Chakrabarty*, 447 U.S. 303, 308, 206 USPQ 193, 196-97 (1980):

> [T]his Court has read the term "manufacture" in §101 in accordance with its dictionary definition to mean "the production of articles for use from raw or prepared materials by giving to these materials new forms, qualities, properties, or combinations, whether by hand-labor or by machinery." *American Fruit Growers, Inc. v. Brogdex Co.*, 283 U.S. 1, 11 (1931). Similarly, "composition of matter" has been construed consistent with its common usage to include "all compositions of two or more substances and ... all composite articles, whether they be results of chemical union, or of mechanical mixture, or whether they be gases, fluids, powders or solids." *Shell Development Co. v. Watson*, 149 F. Supp. 279, 280 (D.C. 1957) (citing 1 A. Deller, Walker on Patents § 14, p. 55 (1st ed. 1937). [Parallel citations omitted.]

The signal is not composed of matter and is clearly not a "composition of matter."

A "manufacture" is the residual category for products. 1 Chisum, *Patents* § 1.02[3] (2004) (*citing* W. Robinson, *The Law of Patents for Useful Inventions* 270 (1890)). If a signal falls within any category of § 101, it must fall within this category. The definition of "manufacture" from *Diamond v. Chakrabarty* requires a tangible article prepared from materials. The other cases dealing with manufactures also require a tangible physical article. The CCPA held in *In re Hruby*, 373 F.2d 997, 153 USPQ 61 (CCPA 1967) that there was no distinction between the meaning of "manufacture" in § 101 and "article of manufacture" in § 171 for designs. The issue in *Hruby* was whether that portion of a water fountain which is composed entirely of water in motion was an article of manufacture. The CCPA relied on the analysis of the term "manufacture" in *Riter-Conley Mfg. Co. v. Aiken*, 203 F. 699 (3d Cir. 1913), a case involving a utility patent. The CCPA stated in *Hruby*:

> The gist of it is, as one can determine from dictionaries, that a manufacture is anything made "by the hands of man" from raw materials, whether literally by hand or by machinery or by art.

373 F.2d at 1000, 153 USPQ at 65. The CCPA held that the fountain was made of the only substance fountains can be made of--water--and determined that designs for water fountains were statutory. Articles of manufacture in designs manifestly require physical matter to provide substance for embodiment of the design. Since an "article of manufacture" under § 171 has the same meaning as a "manufacture" under § 101, it is inevitable that a manufacture under § 101 requires physical matter.

Some further indirect evidence that Congress intended to limit patentable subject matter to physical things and steps is found in 35 U.S.C. § 112, sixth paragraph, which states that an element in a claim for a combination may be expressed as a "means or step" for performing a function and will be construed to cover the corresponding "structure, material, or acts described in the specification and equivalents thereof." "Structure" and "material" indicate tangible things made of matter, not energy or signals.

ANALYSIS

We note that while Appellants have argued claims 1 through 5, and 9 through 24 as a group, the second issue does not apply to independent claims 5, and 14 as they do not recite limitations directed to separate values indicating that the channel has been provisioned and whether a failure has been detected. Therefore, we will consider the claims in two groups, Group 1 consisting of claims 1 through 4, and 22 through 24 and Group 2 consisting of claims 5, and 9 through

21. We select claim 1 as representative of Group 1 and claim 5 as representative of Group 2.

First issue:

Each of the independent claims recites a wavelength lit value indicative of an active channel. As discussed above, Appellants' Specification discusses this lit value being indicative of light being present on the channel regardless of whether the channel has been provisioned or whether there is a failure on the channel. (See Fact 2). As discussed in our Findings of Fact, Beine teaches monitoring the power input to each network element, power being the optical power (i.e. light). (Fact 10). Further, Beine teaches that the wavelength information circulated includes number of channels received. (Fact 5) Beine does not discuss that this information is derived from an indication of channel failure or channel provisioning, but only that it is from the signal received. From these disclosures, we consider that one skilled in the art would recognize that this information is indicative of there being light on the channel regardless of failure or provisioning. Accordingly, we find that Beine does suggest providing a wavelength lit signal indicative of the channel being active.

Independent claim 5 also recites that an amplification level is adjusted based upon this information. As discussed in our Findings of Fact, we also find that Beine teaches this element. (Fact 9).

As the issue of whether Beine teaches separate values indicating that the channel has been provisioned, whether a failure has been detected, and whether the wavelength channel is not applicable to claim 5 or the claims grouped with claim 5, the first issue is dispositive. Thus, we sustain the Examiner's rejection as Appellants' contentions have not convinced us of error in the Examiner's rejection

of claims 5, and 9 through 21. Appellants have presented no separate arguments directed to the Examiner's rejection of claim 6. Accordingly, we sustain the Examiner's rejections of claims 5, 6, and 9 through 21.

Second issue:

Independent claim 1 recites determining for each data channel of a communication node three signals a) a wavelength channel status value indicating whether a channel has been provisioned, b) a wavelength channel failure value indicating whether a failure has been detected on the channel, and c) a wavelength lit value. The meaning of the term wavelength lit is discussed *supra* with respect to the first issue. Appellants' specification, on page 7, discusses provisioning a wavelength as assigning it to carry information. Thus, the scope of claim 1 includes determining three values which are transmitted to different communications nodes.

Independent claim 22 contains similar limitations. We further we note that claim 22 is directed to a signal. It is not clear from the record whether the Examiner considered applying a rejection under 35 U.S.C. § 101. While we do not now enter a rejection under 35 U.S.C. § 101, should there be further prosecution of this application the Examiner should consider whether claim 22 is drawn to statutory subject matter. The Examiner is encouraged to consider the *Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility*, 1300 Off. Gaz. Patent and Trademark Off. (O.G.) 142, 152 (Nov. 22, 2005), in the section entitled "Electro-Magnetic Signals" and our discussion in the principals of law section *supra* when evaluating claim 22.

As discussed above with respect to the first issue, we find that Beine suggest providing a wavelength lit signal indicative of the channel being active. Further, as

stated in our Findings of Fact, Beine teaches a failure signal indicative of a wavelength source failure or being turned off. (Fact 7). However, we do not find that Beine teaches that the network elements transmit an indication to each other of whether a channel has been provisioned. Thus, we cannot sustain the rejection as we do not find that Beine teaches or makes obvious determining the three values claimed and communicating them to another node. Accordingly, we will not sustain the Examiner's rejection of claims 1 through 4 and 22 through 24.

CONCLUSION

We affirm the Examiner's rejections of claims 5, 6, and 9 through 21 under 35 U.S.C. § 103(a) and we reverse the Examiner's rejection of claims 1 through 4 and 22 through 24 under 35 U.S.C. § 103(a). The decision of the Examiner is affirmed-in-part. Should there be further prosecution of this application we encourage to the Examiner to consider whether claim 22 is drawn to statutory subject matter

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv) (2006).

AFFIRMED-IN-PART

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BAKER BOTTS L.L.P.
2001 ROSS AVENUE
SUITE 600
DALLAS TX 75201-2980