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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* ZHI CUI and JAMES WILLIAM REMBERT

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Appeal 2013-010129  
Application 12/511,795  
Technology Center 2600

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Before ST. JOHN COURTENAY III, THU A. DANG, and  
LARRY J. HUME, *Administrative Patent Judges*.

COURTENAY, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

This is an appeal under 35 U.S.C. § 134(a) of the final rejection of claims 1–5, 9–19, and 22. We address the unclear status of claims 6–8 in n.1, *infra*.<sup>1</sup> Claims 20, 21, and 23 were canceled. Claim 24 was withdrawn

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<sup>1</sup> Although claims 6–8 were included in the list of rejected claims on the Final Office Action Summary page, we find no detailed statement of rejection to review for claims 6–8 in the Final Action (mailed June 12, 2012), or in the Non-Final Action, mailed February 15, 2012. Nor does the Examiner indicate in the record that claims 6–8 are allowable or objected to. *Therefore, the status of claims 6–8 is unclear on appeal.* For such claims of undetermined status, the Board has no adverse decision establishing a prima facie case under 35 U.S.C. §132 to review, and thus we have no jurisdiction under pre-AIA 35 U.S.C. §6(b) as to any claims that were not rejected. Accordingly, claims 6–8 are not before us on appeal.

from consideration as being directed to a non-elected invention. (Final Act. 2). We have jurisdiction under 35 U.S.C. § 6(b) regarding the rejections of claims 1–5, 9–19, and 22.

We Affirm.

## INVENTION

The claimed invention relates to methods and apparatus to upgrade communication services in subscriber distribution areas. Spec. ¶ 1.

Claim 1, reproduced below, is representative of the claimed subject matter on appeal:

1. A method of upgrading communication services in a subscriber distribution area, the method comprising:

installing [L1] *an optical network unit communicatively coupled to an optical line terminal located at a remote terminal serving a subscriber distribution area, the optical network unit including a first subscriber downlink interface to serve a first subscriber premises and a second subscriber downlink interface to serve a second subscriber premises, [L2] the optical network unit located at a curb or parkway location separate from a location of the remote terminal;*

providing a first communication service to the first subscriber premises via a first electrically conductive medium communicatively coupled to the first subscriber downlink interface via a first removably attachable subscriber downlink module;

providing a second communication service to the second subscriber premises via a second electrically conductive medium communicatively coupled to the second subscriber downlink interface via a second removably attachable subscriber downlink module; and

in response to receiving a request to upgrade the first communication service, replacing the first removably attachable subscriber downlink module with a third removably attachable subscriber downlink module and connecting an optical

transmission medium between the third removably attachable subscriber downlink module and the first subscriber premises while retaining the second electrically conductive medium communicatively coupled to the second subscriber downlink interface to provide the second communication service to the second subscriber premises.

(Contested limitations lettered as L1 and L2 and emphasized.)

### REJECTIONS

R1. Claims 1 and 5 are rejected under 35 U.S.C. § 102(b) as being anticipated by Swieconek (US 6,980,725 B1, iss. Dec. 27, 2005).

R2. Claims 2–4, 9–19, and 22 are rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of Swieconek and Pruett (US 5,953,389, iss. Sep. 14, 1999).<sup>2</sup>

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<sup>2</sup> The Examiner inexplicably copies the previously withdrawn § 101 rejection of claims 16–19 and 22 in the Answer (5). However, the Examiner withdrew the § 101 rejection of claims 16–19 and 22 in the Advisory Action (2), mailed Oct. 19, 2012. Therefore, this rejection is not before us on appeal. *See* 37 C.F.R. 41.39(a)(1) (“An examiner’s answer is deemed to incorporate all of the grounds of rejection set forth in the Office action from which the appeal is taken (*as modified by any advisory action* and pre-appeal brief conference decision), unless the examiner’s answer expressly indicates that a ground of rejection has been withdrawn.”) (Emphasis added).

However, because “tangible” does not have the same limiting scope as “non-transitory,” in the event of further prosecution, we direct the Examiner’s attention to a precedential Board decision to ensure the “tangible computer readable storage device or storage disk” of independent claim 16 is directed to statutory subject matter under 35 U.S.C. § 101. Under our jurisprudence, the scope of the recited “tangible computer readable storage device or storage disk” appears to encompass transitory media. *See Ex parte Mewherter*, 107 USPQ2d 1857 (PTAB 2013) (precedential) (holding recited machine-readable storage medium ineligible under § 101 since it encompasses transitory media). Here, the recited “tangible computer readable storage device or storage disk” is not claimed as non-transitory, and the originally-filed Specification does not expressly and unambiguously

## CLAIM GROUPING

Based on Appellants' arguments (App. Br. 8–42), we decide the appeal of Rejection R1 of claims 1 and 5 on the basis of independent claim 1.<sup>3</sup> *See* 37 C.F.R. §41.37(c)(1)(vii).

We decide the appeal of Rejection R2 of claims 4, 9–19 and 22 based on representative claim 9.<sup>4</sup> We address separately argued dependent claims 2 and 3, *infra*.

## ANALYSIS

We have considered all of Appellants' arguments and any evidence presented. However, on this record, for the reasons described below, we are not persuaded the Examiner erred.

### R1. *Rejection of Claim 1 under § 102(b)*

**Issue:** Under § 102, did the Examiner err in finding the cited reference discloses contested limitations L1 and L2, as recited in claim 1? In particular, is the Examiner's interpretation of the contested claim limitations "optical network unit," "remote terminal," and "optical network unit located at a curb or parkway location separate from a location of the

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disclaim transitory forms via a definition. (*See e.g.*, Spec. ¶46). Therefore, the "tangible computer readable storage device or storage disk" of claim 16 is not limited to non-transitory forms and appears ineligible under § 101. Although the Board is authorized to reject claims under 37 C.F.R. § 41.50(b), no inference should be drawn when the Board elects not to do so. *See* Manual of Patent Examining Procedure (MPEP) §1213.02.

<sup>3</sup> We note the Examiner's typographical error (Ans. 7) in citing to Pruet instead of Swienconek regarding the anticipation rejection of claim 5 over Swieconek. We consider this oversight as a typographical error because the Examiner is clearly referring to Swieconek, at column 8, lines 20–31, that describes external optical fibers at line 23.

<sup>4</sup> Separately argued independent claim 16 recites commensurate limitations.

remote terminal,” overly broad or unreasonable, within the meaning of claim 1?

Appellants contend:

The final Office Action incorrectly alleges that the central office of Swieconek constitutes the remote terminal of claim 1. (App. Br. 8).

The remote terminal of Swieconek is separate from a central office and houses fibers that connect to a central office.

...

The final Office action incorrectly alleges that the drop sites described by Swieconek constitute the optical network unit of claim 1. . . . Drop sites described in the background section of Swieconek are remote terminals, not the optical network unit of claim 1, as alleged in the final Office action.

(App. Br. 9).

In response, the Examiner, under a broad but reasonable interpretation (BRI), reads the contested “remote terminal” limitation on Swieconek’s central office. (Ans. 10, Final Act. 3, citing Swieconek col. 3, ll. 58–59). The Examiner points out that Applicants’ Specification does not define “remote terminal” or “optical network unit.” (Ans. 12).

The Examiner further finds the contested “remote terminal” limitation is a “generic term which is used to describe any location where an optical network is terminated[,] and is remote from any other such network element.” (Ans. 12–13, Final Act. 3, citing Swieconek col. 1, ll. 27–42).

The Examiner also finds Swieconek’s drop sites describe the claimed optical network units, particularly noting the drop sites in Swieconek are an essential part of the upgrade from copper to fiber. (Ans. 13–14, Final Act. 3, citing Swieconek, col. 4, ll. 48–60).

*Extrinsic Evidence (Appendix B of the Appeal Brief)*

At the outset, we address the evidence presented regarding proposed definitions of the contested claim term “remote terminal”, as shown in Appellants’ Evidence Appendix (Appendices E and F), filed concurrently with the Appeal Brief. Pursuant to our procedural rule, 37 C.F.R. § 41.30, “*Evidence* does not include dictionaries, which may be cited before the Board.”

Here, we find Appellants’ proposed definitions are not citations from *dictionaries*, but are instead extracted from an AT&T FAQ/DSL Report website, and from the appendix of a book entitled “Telecom Crash Course.” (See, Appendices E and F). Therefore, we evaluate this extrinsic evidence to determine whether it is admissible under our procedural rules.

Under 37 C.F.R. 41.37(c)(2):

A brief shall not include any new or non-admitted amendment, or any new or non-admitted affidavit or other Evidence. See § 1.116 of this title for treatment of amendments, affidavits or other evidence filed after final action but before *or on the same date of filing an appeal* and § 41.33 for treatment of amendment, affidavits or other Evidence filed after the date of filing the appeal.

(Emphasis added).

We find 37 C.F.R. § 1.116 is applicable here because Appellants’ Evidence Appendix was filed concurrently with the Appeal Brief. Rule 1.116(e) guides that such submitted evidence “may be admitted upon a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented.”

However, Appellants have not met either of these two procedural requirements. We find the record is silent regarding any showing of: (1) good and sufficient reasons why the submitted evidence is necessary, and (2), why such extrinsic was not presented earlier. Following our procedural rules, we decline to consider the documents cited in Appellants' Evidence Appendix B (containing Appendices E and F).

#### *Claim Construction*

As an initial matter of claim construction, we observe Appellants contest *structural* limitations (“remote terminal,” “an optical network unit”), which are recited within *method* claim 1 (App. Br. 8–11). Thus, instead of contesting the steps or acts performed by the claimed method, Appellants contest the *structural* environment in which the method is performed.

Regarding the contested claim terms “optical network unit” and “remote terminal,” Appellants do not argue a definition (recited in the claims or described in the Specification) that would preclude the Examiner’s broader interpretation of the contested claim limitations.

Our reviewing court guides “[i]t is the [A]pplicants’ burden to precisely define the invention, not the PTO’s.” *In re Morris*, 127 F.3d 1048, 1056 (Fed. Cir. 1997) (citation omitted). The Applicants must do so by placing such definitions in the Specification with sufficient clarity to provide a person of ordinary skill in the art with clear and precise *notice* of the meaning that is to be construed. *See In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994).

Here, we decline to interpret the contested claim terms (limitations L1 and L2) in light of extrinsic, non-dictionary, evidence, which is inadmissible under our procedural rules. *See* Evidence Appendix B.

For patent application claims before the USPTO, “[g]iving claims their broadest reasonable construction ‘serves the public interest by reducing the possibility that claims, finally allowed, will be given broader scope than is justified.’” *In re Am. Acad. of Sci. Tech Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004) (quoting *In re Yamamoto*, 740 F.2d 1569, 1571 (Fed. Cir. 1984)). Because “applicants may amend claims to narrow their scope, a broad construction during prosecution creates no unfairness to the applicant or patentee.” *In re ICON Health and Fitness, Inc.*, 496 F.3d 1374, 1379 (Fed. Cir. 2007) (citation omitted).

This reasoning is applicable here. Given the lack of definitions in the claims or Specification for the aforementioned claim terms recited in limitations L1 and L2, on this record, Appellants have not persuaded us the Examiner’s broader interpretations are overly broad or unreasonable. (Ans. 10–15).

Because Appellants have not persuaded us the Examiner erred, we sustain anticipation rejection R1 of representative claim 1. Associated grouped dependent claim 5 falls with claim 1.

*R2. Rejection of Claims 2–4, 9–19, and 22 under §103*

*Dependent Claim 2*

Appellants contend the contested limitation, “for upgrading to an *optical type of transmission medium*” is not taught or suggested by Pruetz or Swieconek.” (App. Br. 12). Appellants urge: “Pruetz et. al. describe allowing ‘companies to provision a network that is comprised of both digital and analog technologies.’ . . . digital and analog technologies are

implementable using an electrically conductive type of transmission medium without needing an optical type of transmission medium.” (App. Br. 12).

However, we agree with the Examiner’s finding Pruett’s teaching of “providing updates to subscribers profiles indicating that subscribers are enabled for upgrading to an optical transmission medium [was] well known in the art,” and thus teaches or suggests the contested claim 2 limitation “enabled for upgrading to an optical type of transmission medium.” (Final Act. 6, citing Pruett, col. 43, l. 63–col. 46, l. 1).

We also agree with the Examiner that Pruett’s description of replacing twisted pair wires with optical fiber for upgrading networks would have taught or suggested the contested “upgrading” limitation recited in claim 2. (Ans. 15, citing Pruett col. 46, ll. 58–67).

We additionally agree with the Examiner that Swieconek’s teaching that any communication hardware can be upgraded to new communication hardware at least suggests the claim 2 limitation of: “upgrading to an optical type of transmission.” (Final Act. 5–6, citing Swieconek, col. 9, ll. 1–26).

For at least these reasons, on this record, we are not persuaded the Examiner erred. Therefore, we sustain the Examiner’s § 103 rejection R2 of dependent claim 2 over the combination of Swieconek and Pruett.

### *Dependent Claim 3*

Regarding claim 3, Appellants contend:

Pruett et al. do not teach or suggest that the facilities modification and office equipment replacement involve updating a first subscriber line type entry in a first subscriber profile to indicate that a first subscriber line comprises an optical transmission medium. The facilities modification and

office equipment replacement of Pruett et al. may be based solely on an electrically conductive type of transmission medium without involving any optical transmission medium. (App. Br. 15–16).

Given the similarity with the claim construction issues discussed above regarding to claim 2, we are not persuaded the Examiner’s broader reading of claim 3 on the cited prior art is overly broad, or unreasonable. Therefore, for essentially the same reasons articulated by the Examiner (Final Act. 6–7), we sustain § 103 rejection R2 of dependent claim 3 over the combination of Swieconek and Pruett.

#### *Independent Claim 9*

Appellants contend: “The final Office action incorrectly alleges that the drop sites of Swieconek constitute the optical network units of claim 9, and that the central office of Swieconek constitutes the remote terminal of claim 9. . . A central office is not a remote terminal.” (App. Br. 20–21).

However, given the claim construction issues discussed above regarding claim 1, on this record, we are not persuaded the Examiner’s broader interpretations of the claimed “optical network units” and “remote terminal” (claim 9), respectively, are overly broad or unreasonable. *See* Ans. 11–13. The Examiner concludes, in pertinent part:

Swieconek's term ‘remote terminal’ is essentially a generic term which is used to describe any location where an optical network is terminated and is remote from any other such network element. In other words, a "remote terminal" in Swieconek can house a central office and can also be what Swieconek labels a "drop site," i.e. a site that connects a subscriber to the optical network since here too the optical network can and will be

terminated based on the type of connectivity the subscriber elects. Furthermore, it bears repeating that Appellant's specification fails to define the term "remote terminal" in any particular manner much less a manner that would structurally or functionally distinguish it from Swieconek's remote terminal.

(Ans. 12–13).

However, Appellants further contend:

Pruett et al. do not teach or suggest that the facilities modification and office equipment replacement involve tracking transmission medium types installed between optical network units. The facilities modification and office equipment replacement of Pruet et al. may be based solely on an electrically conductive type of transmission medium without involving any optical network units.

(App. Br. 22).

[T]he Examiner has failed to provide a convincing line of reasoning of how Pruet et al. teach or suggest updating a first subscriber line upgradeable entry in a first subscriber profile in a database associated with a first subscriber premises and a second subscriber line upgradeable entry in a second subscriber profile in the database associated with a second subscriber premises to indicate that a first subscriber line associated with the first subscriber premises and a second subscriber line associated with the second subscriber premises are enabled for replacement with an optical type of transmission medium.

(App. Br. 24).

We find Appellants are attacking the teachings of the references in isolation and do not specifically rebut the Examiner's ultimate legal conclusion of obviousness which is based on the *combined* teachings and suggestions of Swieconek and Pruet. *See In re Merck & Co., Inc.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986) (One cannot show nonobviousness by attacking

references individually where the rejections are based on combinations of references).

On this record, and by the preponderance of evidence, we do not find Appellants' arguments persuasive regarding the contested claim 9 limitations: "remote terminal", "optical network units", and "optical type of transmission medium," for the same reasons discussed above regarding claims 1 and 2.

We agree with the Examiner that Pruett's description of upgrading of a copper based twisted-pair unit with optical fiber would have taught or suggested: "enabled for replacement with an optical type of transmission medium," as recited in claim 9. (Ans. 16, Pruett col. 46, ll. 58-67).

We also agree with Examiner's additional finding that Swieconek "teaches upgrading a copper based network unit to an optical network unit." (Ans. 16, *see also* Swieconek, col. 4, ll. 48-60).

Appellants further contend:

[T]he Examiner has failed to provide a convincing line of reasoning of how Pruett et al. teach or suggest updating a first subscriber line type entry in a first subscriber profile to indicate that a first subscriber line comprises an optical type of transmission medium.

(App. Br. 28).

Pruett et al. describes allowing "companies to provision a network that is comprised of both digital and analog technologies." *Id.* at 9:15-19 (emphasis added). Pruett et al. do not teach or suggest that provisioning a network that comprises both digital and analog technologies constitutes updating a first subscriber line type entry in a first subscriber profile to indicate that a first subscriber line comprises an optical type of transmission medium and maintaining a second subscriber line

type entry in a second subscriber profile to indicate that a second subscriber line comprises an electrically conductive type of transmission medium. Digital and analog technologies are implementable using an electrically conductive type of transmission medium without needing an optical type of transmission medium.

(App. Br. 29).

However, we find the preponderance of evidence supports the Examiner's underlying factual findings and ultimate legal conclusion of obviousness, which are based on the *combined* teachings and suggestions of Swieconek and Pruett (Ans. 8–9):

Swieconek discloses that "any communication hardware" can be upgraded to "new communication hardware" (column 9 lines 1-14), that the upgrade may be merely a "change in specification" (column 9 lines 15-26), and that "various permutations and combinations of technology upgrades and/or downgrades may be performed," thereby suggesting an update in a subscriber's profile to match any hardware upgrades. Furthermore, Pruett specifically discloses that maintaining a database to track transmission medium types installed between a plurality of optical network units and subscriber premises in a subscriber distribution area (i.e. "database" of column 43 line 63 - column 46 line 1 of Pruett) and that providing updates to subscriber profiles indicating that subscribers are enabled for upgrading to an optical transmission medium is well known in the art (column 43 line 63 - column 46 line 1 of Pruett).

Therefore, on this record, we do not find Appellants' arguments persuasive for essentially the same reasons articulated by the Examiner in the Answer, as further discussed above. Accordingly, we sustain the Examiner's § 103 rejection R2 of independent claim 9, and the grouped claims which fall therewith. (*See Claim Grouping, supra*).

**REPLY BRIEF**

To the extent Appellants may advance new arguments in the Reply Brief (Reply Br. 1–13), not in response to a shift in the Examiner's position in the Answer, we note arguments raised in a Reply Brief that were not raised in the Appeal Brief or are not responsive to arguments raised in the Examiner's Answer will not be considered except for good cause. *See* 37 C.F.R. § 41.41(b)(2). Here, Appellants have not shown good cause. We additionally note that no new evidence may be submitted in a Reply Brief. *See* 37 C.F.R. § 41.41.

**DECISION**

We affirm the Examiner's rejection R1 of claims 1 and 5 under § 102(b)

We affirm the Examiner's rejection R2 of claims 2–4, 9–19, and 22 under § 103(a).

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) (2011).

**AFFIRMED**

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