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LEVEL 3 COMMUNICATIONS, LLC  
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EXAMINER
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JAGANNATHAN, MELANIE

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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* CHRISTOPHER J. GIBBINGS

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Appeal 2015-004458  
Application 13/526,352<sup>1</sup>  
Technology Center 2400

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Before NATHAN A. ENGELS, KAMRAN JIVANI, and  
JOHN D. HAMANN, *Administrative Patent Judges*.

HAMANN, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellant files this appeal under 35 U.S.C. § 134(a) from the Examiner's Final Rejection of claims 18–32. The Examiner objected to claim 22 as being dependent upon a rejected base claim but allowable if rewritten in independent form and the double patenting rejection is overcome. We have jurisdiction under 35 U.S.C. § 6(b). We affirm.

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<sup>1</sup> According to Appellant, the real party in interest is Level 3 Communications, LLC. Br. 2.

### THE CLAIMED INVENTION

Appellant's claimed invention relates to "link fate sharing in multi-router configurations." Spec. ¶ 2. Claims 18 and 27 are illustrative of the subject matter of the appeal and are reproduced below.

18. A method for routing communication traffic in a network, the method comprising:

detecting that a link in a parallel link configuration has failed; and

in response to detecting that the link in the parallel link configuration has failed, adjusting one or more metrics associated with other links in the parallel link configuration to indicate that none of the links in the parallel configuration are available.

27. A method for routing data, the method comprising:

detecting that a link has failed in a parallel link configuration;

determining whether a minimum number of links in the parallel link configuration are operational;

if the minimum number of links in the parallel link configuration are operational, advertising actual metrics associated with the operational links; and

if the minimum number of links in the parallel link configuration are not operational, advertising one or more artificial metrics associated with any remaining operational links in the parallel link configuration.

### REJECTIONS ON APPEAL

(1) The Examiner rejected claims 18 and 25 under 35 U.S.C. § 102(e) as being anticipated by Sundaresan et al. (US 7,602,726 B1; issued Oct. 13, 2009) (hereinafter "Sundaresan").

(2) The Examiner rejected claims 21, 23, and 26 under 35 U.S.C. § 103(a) as being unpatentable over Sundaresan.

(3) The Examiner rejected claims 19, 20, 24, 27, and 28 under 35 U.S.C. § 103(a) as being unpatentable over the combination of Sundaresan and Doverspike et al. (US 2009/0187795 A1; published July 23, 2009) (hereinafter “Doverspike”).

(4) The Examiner rejected claims 29–32 under 35 U.S.C. § 103(a) as being unpatentable over the combination of Sundaresan, Doverspike, and Johnson (US 6,765,910 B1; issued July 20, 2004).

(5) The Examiner rejected claims 18–32 for obviousness-type double patenting over claims 1–14, 16, and 17 of U.S. Patent No. 8,203,938.

(6) The Examiner rejected claims 19 and 30 under 35 U.S.C. § 112, second paragraph, for being indefinite with respect to the term “artificially high.”

#### ANALYSIS

We have reviewed the Examiner’s rejections in light of Appellant’s contentions that the Examiner erred. In reaching our decision, we consider all evidence presented and all arguments made by Appellant.

We disagree with Appellant’s arguments, except with respect to the § 112 rejection, and we incorporate herein and adopt as our own the findings, conclusions, and reasons set forth by the Examiner in (1) the May 19, 2014 Final Office Action (“Final Act.” 2–21) and (2) the December 29, 2014 Examiner’s Answer (Ans. 2–24), except with respect to the § 112 rejection. We highlight and address, however, specific findings and arguments below for emphasis.

(1) Adjusting metrics

Appellant argues Sundaresan fails to disclose “in response to detecting that the link in the parallel link configuration has failed, adjusting one or more metrics associated with other links in the parallel link configuration to indicate that none of the links in the parallel configuration are available,” as recited in claim 18. Br. 6. Specifically, Appellant argues Sundaresan discloses “releasing network traffic based on a configured policy, but not adjusting metrics.” *Id.* (citing Sundaresan Figs. 2 (200, 210), 7; col. 6, ll. 31–67; col. 7, ll. 46–55; col. 11, ll. 30–45). Appellant further argues “Sundaresan merely communicates the new bandwidth, and is altogether silent about adjusting metrics associated with other links to indicate that none of the links in the parallel configuration are available.” *Id.* at 6–7. Appellant also argues Sundaresan teaches away from the disputed limitation because “Sundaresan operates according to a predetermined policy.” *Id.* at 7.

The Examiner finds Sundaresan discloses the disputed limitation. *See* Ans. 16–19. With respect to the first portion of the disputed limitation — “in response to detecting that the link in the parallel link configuration has failed” — the Examiner finds Sundaresan discloses communicating the detection of a bandwidth degradation (i.e., a failure) in a link in the inverse multiplexing over ATM (“IMA”) group (i.e., a parallel link configuration of a plurality of links) in order to optimize the link aggregation system during such failures. *See* Ans. 16 (citing Sundaresan col. 8, ll. 1–20, 46–52; Figs. 4 (element 401), 7), 17 (citing Sundaresan col. 1, ll. 54–56).

As to the remainder of the disputed limitation — “adjusting one or more metrics associated with other links in the parallel link configuration to

indicate that none of the links in the parallel configuration are available” — the Examiner construes “a metric” to mean “a measurement.” *See* Ans. 17 (citing Newton’s Telecom Dictionary). The Examiner finds Sundaresan discloses adjusting the individual bandwidths — “[a] bandwidth of a link is a measurement of the capacity of the link [(i.e., a metric)]” — of each of the remaining links in the IMA group in response to the link failure to account for the newly, reduced available bandwidth of the group. *See* Ans. 17–18 (citing Sundaresan Fig. 4; col. 1, ll. 54–56). The Examiner also finds the bandwidth adjustment indicates none of the links in the group are available (i.e., releases a call) when determining insufficient bandwidth remains available from the remaining links in the group. *See* Ans. 17–19 (citing Sundaresan Figs. 4 (elements 401–403, 405), 5 (element 505), 7 (depicting a network releasing calls across a degraded link group); col. 9, ll. 30–55; col. 10, ll. 66–67; col. 11, ll. 7–16, 22–29, 31–36).

We agree with the Examiner’s findings and adopt them as our own. For example, we agree Sundaresan’s disclosure of upon detecting a link failure, adjusting the bandwidths (i.e., adjusting a capacity measurement (i.e., metric)) of the remaining group links indicating insufficient group bandwidth (i.e., the remaining group links are unavailable) discloses the disputed limitation. *See* Sundaresan Figs. 4, 5, 7; col. 1, ll. 54–56; col. 8, ll. 1–20, 46–52; col. 9, ll. 30–55; col. 10, ll. 66–67; col. 11, ll. 7–16, 22–29, 31–36. We also find Appellant’s teaching away argument inapposite. *See Celeritas Tech., Ltd. v. Rockwell Int’l Corp.*, 150 F.3d 1354, 1361 (Fed. Cir. 1998) (finding “whether a reference ‘teaches away’ from the invention is inapplicable to an anticipation analysis”). Accordingly, we sustain the Examiner’s rejection of claim 18.

(2) Conditional limitation

Appellant argues the combination of Sundaresan and Doverspike fails to teach or suggest “if the minimum number of links in the parallel link configuration are not operational, advertising one or more artificial metrics associated with any remaining operational links in the parallel link configuration,” as recited in claim 27. Br. 8–9.

This disputed limitation, however, is a conditional step (i.e., “if the minimum number of links in the parallel link configuration are not operational . . .”). A conditional method step generally does not need to be performed under the broadest reasonable interpretation of the claim, which encompasses instances in which the method ends when the prerequisite condition for the step is not met. *See Ex parte Schulhauser*, Appeal No. 2013-007847, at 9–10 (PTAB Apr. 28, 2016) (precedential). Thus, the broadest reasonable interpretation encompasses methods where only the non-conditional steps are performed<sup>2</sup> and the conditional method step need not be shown in establishing invalidity. *See id.* Accordingly, we sustain the Examiner’s rejection of claim 27.

(3) Link metric adjustment module

Appellant argues the combination of Sundaresan, Doverspike, and Johnson, and Doverspike in particular, fails to teach or suggest “a link metric adjustment module operable to set a metric of the first link to the artificially high cost until the minimum number of required links are operational after startup of the router or failure and reactivation of the first link,” as recited in claim 30. Br. 10–11. Specifically, Appellant argues

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<sup>2</sup> We note Appellant did provide argument concerning the alternative conditional method step of claim 27.

Doverspike instead teaches “that the scheduled maintenance of routers may be handled by network managers by artificially increasing to a very high number the ‘cost’ assigned to all links connected to the router. This clearly is not the same as having” the disputed limitation. Br. 11 (citing Doverspike ¶ 67). Rather, “[t]his reduces traffic to the router but allows the router to operate if there is a failure somewhere else.” *Id.*

The Examiner finds, and we agree, the combination, and Doverspike in particular, teaches or suggests the disputed limitation. *See* Ans. 23–24. Specifically, the Examiner finds, and we agree, “Doverspike discloses artificially increasing to a very high number the ‘cost’ assigned to all links connected to the router, so that the only way any traffic will go through this router is if its unavoidable.” Ans. 24 (citing Doverspike ¶ 67). The Examiner also finds, and we agree, Doverspike teaches or suggests “[r]e-routing of traffic [can be] performed as part of a restoration algorithm.” *Id.* (citing Doverspike ¶ 32). The Examiner concludes it would have been obvious to one of ordinary skill “to modify Sundaresan’s IMA group being down and having to re-route data [with] Doverspike’s disclosure of links set to a very high cost and advertising said information to re-route traffic until the failed link is restored.” *Id.* We agree with the Examiner’s conclusion. Accordingly, we sustain the Examiner’s rejection of claim 30.

(4) Artificially high values

Appellant argues the phrase “artificially high” as used in claims 19 and 30 is not indefinite, and that “[o]ne skilled in the art would understand that the relative term ‘artificially high’ references the values prior to being increased.” Br. 5. Appellant further notes that the Specification is replete

with examples of the usage of this phrase — “artificially high.” *Id.* (citing Spec. ¶¶ 7, 12, 14, 31, 35, 36, 40, 41, 46, 49, 50, 52, 53, 57–59, 62, 67–69).

The Examiner finds the term “‘artificially [high]’ does not possess a well-known definition,” including not being “well known to mean values prior to being increased.” Ans. 15. The Examiner also finds the term is unclear when in light of the Specification, which neither defines “artificially high” nor provides a threshold or context for the term relative to another metric or value. *Id.* at 15–16. The Examiner concludes “one of ordinary skill in the art would not be reasonably apprised of the scope of the term ‘artificially.’” *Id.*

The test for definiteness under 35 U.S.C. § 112, second paragraph, is whether “those skilled in the art would understand what is claimed when the claim is read in light of the specification.” *Orthokinetics, Inc. v. Safety Travel Chairs, Inc.*, 806 F.2d 1565, 1576 (Fed. Cir. 1986) (citations omitted); *see also Ex parte Miyazaki*, 89 USPQ2d 1207, 1210–13 (BPAI 2008) (precedential) (applying the *Orthokinetics* standard).

We agree with Appellant that one of ordinary skill in the art would understand the scope of what is being claimed in claims 19 and 30. For example, we agree that one of skill in the art would understand the claimed “artificially high value,” when read in light of the Specification, refers to a sufficiently high value that creates an artificial failure of the link by being chosen to be higher than the costs of the other links connected to the router. *See, e.g.*, Spec. ¶¶ 31 (“[R]outers in the configuration set the metric of the other links (that have [not] failed) at an artificially high cost. In so doing, data will not be transmitted over links having an artificially high cost, but rather routed via other links.”), 35 (“The artificially high value is chosen to

be higher than metric costs of other links connected to routers 202a and 202b.”). Accordingly, we do not sustain this rejection.

(5) Obviousness type double patenting

The Examiner rejected claims 18–32 for obviousness-type double patenting over claims 1–14, 16, and 17 of U.S. Patent No. 8,203,938. Final Act. 3–6. Appellant does not provide argument traversing the rejection. Br. 2. Accordingly, we sustain the Examiner’s obviousness-type double patenting of claims 18–32. *See Ex parte Frye*, 94 USPQ2d 1072, 1075 (BPAI 2010) (precedential) (“[T]he Board will generally not reach the merits of any issues not contested by an appellant.”); *see also Hyatt v. Dudas*, 551 F.3d 1307, 1313–14 (Fed. Cir. 2008) (finding the Board may treat arguments appellant fails to make for a given ground of rejection as waived).

## CONCLUSION

Based on our findings above, we sustain the Examiner’s § 102 rejection of claim 18, as well as claim 25 which was not argued separately. We also sustain the Examiner’s § 103 rejection of claims 27 and 30, as well as claims 19–21, 23, 24, 26, 28, 29, 31, 32 for which Appellant did not provide separate arguments for their patentability.

## DECISION

(1) We affirm the Examiner’s 35 U.S.C. § 102(e) rejection of claims 18 and 25.

(2) We affirm the Examiner’s 35 U.S.C. § 103(a) rejections of claims 19–21, 23, 24, and 26–32.

Appeal 2015-004458  
Application 13/526,352

(3) We affirm the Examiner obviousness-type double patenting rejection of claims 18–32.

(4) We reverse the Examiner’s 35 U.S.C. § 112, second paragraph rejection of claims 19 and 30.

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).

AFFIRMED