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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte DONG-SHIN JUNG, JOO-YEOL LEE, SE-HEE HAN,
JE-YOUNG MAENG, FEI FEI FENG, and RUSSELL BERKOFF

Appeal 2016-008290
Application 12/541,524
Technology Center 2400

Before ALLEN R. MacDONALD, LINDA E. HORNER, and
MICHAEL J. ENGLE, *Administrative Patent Judges*.

MacDONALD, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF CASE

Appellants appeal under 35 U.S.C. § 134(a) from a rejection of claims 1, 2, 4–11, and 13–18. Final Act. 1. Claims 3 and 12 have been cancelled. App. Br. 14, 17. We have jurisdiction under 35 U.S.C. § 6(b).

Exemplary Claim

Exemplary claim 1 under appeal reads as follows (emphasis, formatting, and bracketing added):

1. A method for playing back a scene using Universal Plug and Play (UPnP), comprising:
 - [A.] sending, by a control point, a request for a scene to be played back to a media server that stores Audio/Video (AV) content;
 - [B.] receiving, by the control point, one or more scene objects comprising the scene to be played back from the media server in response to the request, each scene object including metadata representing *at least one of*
 - [i.] a precedence relation indicating the scene object's location in a sequence of scene objects *and*
 - [ii.] a connection relation indicating one or more scene objects capable of replacing the scene object, the connection relation including *at least one of*
 - [1.] a connection branch *and*
 - [2.] a contents connection list having a first group identification,
 - [a.] the connection branch configured to move to and play back a scene object at a playback time of a scene object including inter-object connection relation information, which is represented by designating scene objects in a connection list having a second group identification, and

[b.] the contents connection list configured to access a scene object in a precedence relation list;

- [C.] [i.] receiving, by the control point, information about supportable protocol and file format from a media renderer that will play back content, and
- [ii.] determining a content resource, a protocol and a file format to be used for playback based on the information;
- [D.] composing, by the control point, the scene to be played back based on the received one or more scene objects; and
- [E.] playing back, by the media renderer, the composed scene.

Rejections

1. The Examiner rejected claims 1, 2, 4–8, 10, 11, and 13–17 under 35 U.S.C. § 103(a) as being unpatentable over the combination of Encarnacion et al. (US 2005/0138137 A1; June 23, 2005) and Ryu (US 2008/0050096 A1; Feb. 28, 2008).

2. The Examiner rejected claims 9 and 18 under 35 U.S.C. § 103(a) as being unpatentable over the combination of Encarnacion, Ryu, and Hlasny et al. (US 2005/0108766 A1; May 19, 2005).

Appellants' Contentions

1. Appellants contend the Examiner erred in rejecting claim 1 under 35 U.S.C. § 103(a) because

Encarnacion . . . does not disclose, teach, or suggest that the directory 600 includes *at least one of a connection branch and a contents connection list* . . . as recited in Claim 1. Therefore, Encarnacion does not render obvious Claim 1.

App. Br. 9 (emphasis added).

2. Appellants also contend the Examiner erred in rejecting claim 1 under 35 U.S.C. § 103(a) because

[t]he Examiner relies on Ryu for teaching that “each scene object [represents] *at least one of precedence relation* indicating the scene object’s location in a sequence of scene objects and ... scene object representing connection relation”. (See Final Office Action p. 5.) However, Ryu does not disclose, teach, or suggest *a connection relation* including at least one of *a connection branch and a contents connection list . . .* as recited in Claim 1. App. Br. 9 (emphasis added).

Issue on Appeal

Did the Examiner err in rejecting claim 1 as being obvious?

CLAIM CONSTRUCTION

Independent claim 1 recites “each scene object including metadata representing *at least one of a precedence relation . . . and a connection relation*” and “the connection relation including *at least one of a connection branch and a contents connection list.*” (Emphasis added.) Independent claims 9, 10, and 18 recite analogous limitations using the same format of “*at least one of [A] and [B].*”

The Federal Circuit Addressed “at least one of A and B” in SuperGuide

Our reviewing court has held that the plain meaning of “at least one of A and B” is the conjunctive phrase “at least one of A and at least one of B.” *SuperGuide Corp. v. DirecTV Enters., Inc.*, 358 F.3d 870, 885–86 (Fed. Cir. 2004). In support of this conclusion, the Federal Circuit explained, “A common treatise on grammar teaches that ‘an article of a preposition applying to all the members of the series must either be used only before the first term or else be repeated before each term.’” *Id.* at 886 (quoting

William Strunk, Jr. & E.B. White, *The Elements of Style* 27 (4th ed. 2000)). “Thus, ‘in spring, summer, or winter’ means ‘in spring, in summer, or in winter.’” *Id.* (quoting Strunk, *The Elements of Style* 27). The ordinary meaning therefore compelled a difference in meaning between a list separated by “and” versus the same list separated by “or.”

Upon consideration of the parties’ opposing constructions and evidence, the court in *SuperGuide* also pointed out that neither the specification nor the prosecution history in that case “enlarge[d] the claim scope from its plain and ordinary meaning.” *Id.* at 887–88.

Subsequent Cases Applying SuperGuide

Although numerous courts have followed *SuperGuide*,¹ some courts and administrative bodies at times have distinguished *SuperGuide* on the basis that the normal conjunctive meaning of “at least one of . . . and” does not apply when the patent’s claims, specification, or prosecution history necessitate a broader meaning.² Instead, given the specific facts in those

¹ *E.g.*, *IPXL Holdings, L.L.C. v. Amazon.com, Inc.*, 333 F. Supp. 2d 513, 525–26 (E.D. Va. Aug. 25, 2004); *TouchTunes Music Corp. v. Rowe Int’l Corp.*, 727 F. Supp. 2d 226, 238–39 (S.D. N.Y. July 22, 2010); *Stragent LLC v. BMW N. Am. LLC*, No. 6:11CV278 LED-JDL, 2013 WL 3367295, at *4–6 (E.D. Tex. July 3, 2013); *Modine Mfg. Co. v. Borg-Warner, Inc.*, No. 12-CV-815-JPS, 2013 WL 5651381, at *10 (E.D. Wis. Oct. 15, 2013); *Motorola Mobility, Inc. v. Apple Inc.*, No. 1:12-CV-20271, 2013 WL 12061831, at *3 (S.D. Fla. Nov. 19, 2013); *LMT Mercer Group, Inc. v. Maine Ornamental, LLC.*, No. 10-4615, 2014 WL 183823, at *27 (D. N.J. Jan. 16, 2014); *see also F5 Networks Inc. v. A10 Networks, Inc.*, No. C10-654 MJP, 2011 WL 3516054, at *1 (W.D. Wash. Aug. 11, 2011).

² *E.g.*, *Fujifilm Corp. v. Motorola Mobility LLC*, No. 12-CV-03587-WHO, 2015 WL 1265009, at *8 (N.D. Cal. Mar. 19, 2015) (summarizing cases and noting “*SuperGuide* did not erect a universal rule of construction for all uses of ‘at least one of’ in all patents” when the specification or claims suggest

cases, these tribunals applied a disjunctive meaning to “at least one of A and B,” effectively reading the conjunctive “and” as a disjunctive “or.”

otherwise); *Power-One, Inc. v. Artesyn Techs., Inc.*, No. 2:05cv463, 2007 WL 896093, at *14 (E.D. Tex. Mar. 22, 2007) (distinguishing based on the specification and claims, and construing “at least one of X, Y, and Z” as “a group (*i.e.*, the group includes X, Y, and Z) from [which] at least one is selected”); *Inventio AG v. ThyssenKrupp Elevator Ams. Corp.*, No. 08-874-RGA, 2014 WL 129799, at *3–4 (D. Del. Jan. 14, 2014) (distinguishing based on the prosecution history and “every embodiment . . . in the specification”); *Mad Catz Interactive, Inc. v. Razer USA, Ltd.*, No. 3:13-CV-2371-GPC, 2015 WL 3905074, at *13–14 (S.D. Cal. June 25, 2015) (following *SuperGuide* for some claims but distinguishing it for others based on the claim language and embodiments disclosed in the specification); *Joao v. Sleepy Hollow Bank*, 348 F. Supp. 2d 120, 124 (S.D.N.Y. 2004) (rejecting a conjunctive reading of the limitation “the banking transaction is *at least one of* a clearing transaction, a check clearing transaction, an account charging transaction, and a charge-back transaction” as nonsensical because a single banking transaction cannot be all four); *Joao Bock Transaction Sys., LLC v. First Nat’l Bank*, No. 11 C 6472, 2013 WL 3199981, at *6–7 (N.D. Ill. June 24, 2013) (rejecting a conjunctive reading of the limitation “one of approving and disapproving” because it “would render a substantial portion of Plaintiff’s claims meaningless”); *Pinpoint Inc. v. Amazon.com*, No. 03-C-4954, 2004 WL 5681471, at *16 (N.D. Ill. Sept. 1, 2004) (“*Superguide* is inapplicable because the prosecution history supports Pinpoint’s proposed construction” and reveals both the inventors and the examiner “explicitly asserted that the phrase meant . . . ‘*either . . . or*’”); *Dealertrack, Inc. v. Huber*, No. 06-cv-2335-AG, 2008 WL 5792509, at *7 (C.D. Cal. Sept. 27, 2008) (“Here, in contrast, ‘at least one of’ is followed by a colon”), *aff’d in part on other grounds*, 674 F.3d 1315 (Fed. Cir. 2012); *QSC Audio Prods., LLC v. Crest Audio, Inc.*, No. IPR2014-00131, 2015 WL 2089370, at *4–5 (PTAB May 1, 2015) (following *SuperGuide* for one limitation but not another because “*SuperGuide* has been distinguished on the basis that the normal conjunctive meaning does not apply when the specification or claims imply a broader meaning”); *In re Certain Ground Fault Circuit Interrupters*, Inv. No. 337-TA-739, 2012 WL 2394435, at *20–21 (USITC June 8, 2012) (distinguishing because the specification described a disjunctive embodiment but not a conjunctive one).

For example, in *Ex parte Concha*, the issue focused on the construction of a limitation in the “at least one of A and B” format. *Ex parte Concha*, No. 2012-008364, 2015 WL 397716 (PTAB Jan. 28, 2015). Upon consideration of the application’s specification and the positions of the applicants and the Examiner, the panel distinguished *SuperGuide* in the same way as the cases discussed above. *Id.* at *3. The panel in that case agreed with the examiner’s reasoning, and found “*Superguide* is not pertinent here” because the claims and specification suggested only a single item should be selected rather than a plurality. *Id.*

However, in *Ex parte Gardner*, the panel reached the opposite result and followed *SuperGuide*. The claim construction was not directly disputed on the initial appeal, but when raised in a request for rehearing, the panel concluded “providing at least one of a data sources portion and a processes portion” required “providing access to a ‘processes portion’ (*as well as a ‘data sources portion’*).” *Ex parte Gardner*, No. 2009-010298, 2011 WL 180106, at *1 (BPAI Jan. 12, 2011) (emphasis added).

Applying SuperGuide to the Application on Appeal

In the appeal before this panel, neither Appellants nor the Examiner directly address the appropriate construction of the “at least one of A and B” phrases. The Examiner’s Answer states, for the first time we find in the record, the “claim only requires either ‘a precedence relation . . .’ OR ‘a connection relation.’” Ans. 5. However, we find no supporting analysis from the Examiner on why this disjunctive claim construction should be the case instead of the plain meaning of “and.” Rather, without further support, the Examiner merely presents that conclusory statement which, without

more, is in conflict with *SuperGuide*. Appellants' Reply Brief is also silent as to the issue.

For claims written in the format of “at least one of A *and* B,” the Federal Circuit made clear in *SuperGuide* that the plain and ordinary meaning is the conjunctive phrase “at least one of A and at least one of B.” 358 F.3d at 887. An Examiner may adopt a different meaning if called for based upon the usual claim construction considerations, including analyzing the specification for any definition or disavowal. *See id.* (examining the specification to determine whether it supports the plain and ordinary meaning); *id.* at 888 (“Lastly, we decline to enlarge the claim scope from its plain and ordinary meaning based on the prosecution history in this case because the ’211 patentee did not clearly and explicitly define the term ‘and’ in the covered criteria list as ‘or.’”); *see generally Phillips v. AWH Corp.*, 415 F.3d 1303, 1313–19 (Fed. Cir. 2005) (en banc) (holding claim terms should be read in the context of the claims, the rest of the specification, the prosecution history, and in some cases extrinsic evidence). However, like any claim construction straying from the ordinary meaning, the Examiner should set forth the reasoning for such an interpretation, including citations and explanations of relevant portions of the claims, specification, or prosecution history. *See, e.g.*, Manual of Patent Examining Procedure § 2111.01(V) (“an Office action should acknowledge and identify the special definition in this situation”).

The Federal Circuit’s interpretation of “at least one of A and B” in *SuperGuide* also is consistent with how the Federal Circuit ordinarily treats the word “and.” “Although we [the Federal Circuit] have construed ‘and’ to mean ‘or’ when the specification so requires, those cases . . . have a

common theme that . . . the specification *compels* a disjunctive construction for ‘and.’” *Medgraph, Inc. v. Medtronic, Inc.*, 843 F.3d 942, 949–50 (Fed. Cir. 2016) (citation omitted). “For example, in *Ortho–McNeil [Pharm., Inc. v. Mylan Labs., Inc.]*, 520 F.3d 1358, 1361–62 (Fed. Cir. 2008)], we held that ‘and’ meant ‘or’ because as used in [the] claim, *and* conjoins mutually exclusive possibilities.” *Id.* at 949 (quotation omitted). Otherwise, the ordinary meaning of “and” applies.

Here, the Examiner has not provided the supporting analysis necessary to stray from the ordinary meaning set forth in *SuperGuide* and *Medgraph*. Further, our analysis of the Specification, including the claims, does not reveal any clear definition or disavowal which would compel a disjunctive construction and distinguish *SuperGuide* and *Medgraph*.

We look first to the claimed “at least one of a precedence relation . . . and a connection relation.” The Specification states “a precedence relation objectLink *or* a connection relation objectList” (Spec. 11:25, emphasis added), and at Figure 5 shows a precedence relation *without* a connection relation. However, the Specification also provides embodiments in Figures 6 and 7 where a connection relation occurs *in addition to* a precedence relation (Spec. 12:26 through 13:3) (“The *connection branch* represents a *connection relation* for moving to and playing back an object including inter-object *connection relation* information while playing back content according to the inter-object *precedence relation*”) (emphasis added). Thus, we find the Specification supports a *conjunctive* embodiment of the claimed “at least one of a precedence relation . . . *and* a connection relation.”

We next look to the claimed “at least one of a connection branch and a contents connection list.” Again, the Specification provides a disjunctive

example in which a connection relation “may” be represented by either a connection branch “*or*” a connection list (Spec. 12:21–23, emphasis added). Yet neither the claims nor the remainder of the Specification ever suggest that a connection branch and a contents connection list *must be* mutually exclusive. Thus, nothing compels interpreting “and” to mean “or” contrary to its ordinary meaning.

We therefore conclude the “at least one of A and B” phrases of claim 1 are properly construed as “each scene object including metadata representing *at least one of* a precedence relation . . . *and [at least one of]* a connection relation” and “the connection relation including *at least one of* a connection branch *and [at least one of]* a contents connection list.” (Emphasis added.)

As discussed below, we recognize that this claim construction compels a finding that the limitation “at least one of a connection branch and a contents connection list” lacks written description because the Specification discloses only an example of “or,” not “and.” Although we could preserve validity by construing “and” as “or,” we decline to do so here. *See Agilent Techs., Inc. v. Affymetrix, Inc.*, 567 F.3d 1366, 1379 (Fed. Cir. 2009) (“Patent applications do not enjoy the statutory presumption of validity found in 35 U.S.C. § 282.”). A mere example of “or” in the Specification without more that would compel the disjunctive is insufficient to overcome the ordinary meaning of a claim using the conjunctive “and,” even if such a claim construction results in the claim being unpatentable for lack of written description. “It is the applicants’ burden to precisely define the invention, not the PTO’s.” *In re Morris*, 127 F.3d 1048, 1056 (Fed. Cir.

1997). Given the record before us and the opportunity Appellants have to amend the claims, we decline to construe “and” as “or.”

ANALYSIS

Given our rejection of the Examiner’s interpretation of “and” as “or” (*see* Ans. 5), we agree with Appellants (App. Br. 9) that we are unable to find sufficient support for the Examiner’s findings that either Encarnacion (Final Act. 4–5; Ans. 5–7) or Ryu (Final Act. 5–6; Ans. 7–8) teaches or suggests “at least one of a connection branch *and* a contents connection list.” The specific bases in Encarnacion and Ryu of the Examiner’s findings are discussed at pages 6–8 of the Answer and pages 4–5 of the Final Rejection. We have reviewed the cited references. Particularly given that the Examiner’s findings are difficult to parse because the Examiner provides citations for the entire clause rather than specifically identifying separate teachings for a “connection branch” and a “contents connection list,” we find the Examiner has not sufficiently explained how the cited text teaches both a connection branch *and* a connection list. Therefore, we agree with Appellants that Encarnacion “does not disclose, teach, or suggest that the directory 600 includes at least one of a connection branch and a contents connection list” and “Ryu does not cure the deficiencies of Encarnacion” (Reply Br. 4).

Accordingly, we conclude there is insufficient articulated reasoning to support the Examiner’s final conclusion that independent claims 1, 9, 10, and 18 would have been obvious to one of ordinary skill in the art at the time of Appellants’ invention. Dependent claims 2, 4–8, 11, and 13–17 stand with their respective independent claims.

NEW GROUND OF REJECTION

35 U.S.C. § 112, First Paragraph

In a new ground of rejection using our authority under 37 C.F.R. § 41.50(b), we reject claims 1, 2, 4–11, and 13–18 under 35 U.S.C. § 112, first paragraph as failing to comply with the written description requirement. The claims contain subject matter which was not described in the specification in such a way as to “reasonably convey[] to those skilled in the art that the inventor had possession of the claimed subject matter as of the filing date.” *Ariad Pharm., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (en banc).

Appellants’ claim 1 recites “the connection relation including at least one of a connection branch and a contents connection list.” As discussed above, we construe this limitation as requiring “the connection relation including *at least one of* a connection branch *and [at least one of]* a contents connection list.” (Emphasis added.)

We have reviewed Appellants’ Specification and we find no written description support for this limitation. Appellants’ summary of the claimed subject matter (App. Br. 2) indicates support for this limitation is found at “page 12, line 16 to page 13, line 18” of the Specification. The cited text describes Figures 6 and 7. Figure 6 illustrates *a connection branch* according to the present invention, and Figure 7 separately illustrates *a contents connection list Index* according to the present invention. Spec. 10:2–6, 12:16–19.

We conclude neither the cited text nor the figures ever address simultaneously having both a connection branch *and* a contents connection

list. To the contrary, the cited text describes using these connection relations *in the alternative*:

A connection relation between objects may be represented by [(a)] describing IDs of other objects capable of replacing a specific object [i.e., a connection branch] *or* [(b)] an ID of an object connection list.

Spec. 12:21–23 (emphasis added). Thus, the cited portion of the Specification may provide written description for a connection branch *or* a contents connection list, but Appellants have not identified any written description support for a single embodiment having both a connection branch *and* a contents connection list, as presently required by claim 1.

We note the introductory sentence to the paragraph beginning at line 25 of page 12 of the Specification states “[a]s an example based on the connection relation between objects, a connection branch *and* a contents connection list Index can be considered” (emphasis added). However, while the conjunctive connector “and” is used, the remaining sentences of that paragraph and the next paragraph (Spec 13:12–18) each discuss an example focused on either “a connection branch” (Figure 6) or “a contents connection list” (Figure 7), not both simultaneously. Thus, reading the introductory sentence in its full context, we deem its use of “and” to indicate that separate examples for both “a connection branch” and “a contents connection list” are considered in the Specification, not that both occur in the *same* embodiment.

We further note Appellants are not precluded from amending the independent claims to set forth the desired relationship between (A) a connection branch and (B) a contents connection list, such as

- 1) “at least one of A *or* B”;
- 2) “at least one of A *or* at least one of B”; or
- 3) “at least one *selected from the group* of A and B”.

However, “[i]t is the applicants’ burden to precisely define the invention, not the PTO’s.” *Morris*, 127 F.3d at 1056. Given the record before us and the opportunity Appellants have to amend the claims, we decline to construe “and” as “or” and instead hold that the Specification’s use of the word “or” indicates a lack of written description for the word “and” rather than any clear intent to redefine “and” to mean “or.”

The same claim limitation is recited in independent claims 9, 10, and 18, and incorporated by dependency in claims 2, 4–8, 11, and 13–17.

Accordingly, we reject claims 1, 2, 4–11, and 13–18 under 35 U.S.C. § 112, first paragraph for lack of written description.

CONCLUSIONS

- (1) Appellants have established the Examiner erred in rejecting claims 1, 2, 4–11, and 13–18 as unpatentable under 35 U.S.C. § 103(a).
- (2) We newly reject claims 1, 2, 4–11, and 13–18 under 35 U.S.C. § 112, first paragraph for lack of written description.
- (3) Claims 1, 2, 4–11, and 13–18 are not patentable.

DECISION

The Examiner’s rejections of claims 1, 2, 4–11, and 13–18 are reversed.

Claims 1, 2, 4–11, and 13–18 are newly rejected for lack of written description.

TIME TO RESPOND

This decision contains a new ground of rejection pursuant to 37 C.F.R. § 41.50(b). Section 41.50(b) provides that “[a] new ground of rejection pursuant to this paragraph shall not be considered final for judicial review.” Section 41.50(b) also provides:

When the Board enters such a non-final decision, the appellant, within two months from the date of the decision, must exercise one of the following two options with respect to the new ground of rejection to avoid termination of the appeal as to the rejected claims:

(1) *Reopen prosecution.* Submit an appropriate amendment of the claims so rejected or new Evidence relating to the claims so rejected, or both, and have the matter reconsidered by the examiner, in which event the prosecution will be remanded to the examiner. The new ground of rejection is binding upon the examiner unless an amendment or new Evidence not previously of Record is made which, in the opinion of the examiner, overcomes the new ground of rejection designated in the decision. Should the examiner reject the claims, appellant may again appeal to the Board pursuant to this subpart.

(2) *Request rehearing.* Request that the proceeding be reheard under § 41.52 by the Board upon the same Record. The request for rehearing must address any new ground of rejection and state with particularity the points believed to have been misapprehended or overlooked in entering the new ground of rejection and also state all other grounds upon which rehearing is sought.

Further guidance on responding to a new ground of rejection can be found in the Manual of Patent Examining Procedure § 1214.01.

Appeal 2016-008290
Application 12/541,524

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).

REVERSED
37 C.F.R. § 41.50(b)