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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/632,766	02/26/2015	Philip Jurey	STL18495	6004
73462	7590	12/27/2019	EXAMINER	
Hall Estill - Seagate Technology LLC 100 North Broadway, Suite 2900 Oklahoma City, OK 73102-8820			EDOUARD, JEAN C	
			ART UNIT	PAPER NUMBER
			2138	
			NOTIFICATION DATE	DELIVERY MODE
			12/27/2019	ELECTRONIC

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte PHILIP JUREY, DALE T. RILEY, and JOHN W. SHAW

Appeal 2018-007811
Application 14/632,766
Technology Center 2100

Before ROBERT E. NAPPI, JOHNNY A. KUMAR, and JOYCE CRAIG,
Administrative Patent Judges.

CRAIG, *Administrative Patent Judge.*

DECISION ON APPEAL

STATEMENT OF THE CASE

Pursuant to 35 U.S.C. § 134(a), Appellant¹ appeals from the Examiner's decision to reject claims 1–20. *See* Final Act. 1. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

¹ We use the word Appellant to refer to “applicant” as defined in 37 C.F.R. § 1.42. Appellant identifies the real party in interest as Seagate Technology LLC. Appeal Br. 1.

CLAIMED SUBJECT MATTER

The claims are directed to a multi-device storage with consolidated channel and control circuitry. Claim 1, reproduced below, is illustrative of the claimed subject matter:

1. An apparatus comprising:

a plurality of data storage devices each comprising a local driver circuit adapted to transfer data with a local memory module; and

a main driver circuit external to the plurality of data storage devices configured to stream frequency modulated write data via parallel data transfer paths to the respective local driver circuits for concurrent transfer of the frequency modulated write data to the respective local memory modules.

REJECTIONS

Claims 1–4, 6–13, 15–17, 19, and 20 stand rejected under 35 U.S.C. § 103 as unpatentable over the combination of DeCenzo (US 2006/0277362 A1; published Dec. 7, 2006) and Sloan et al. (US 2002/0154439 A1; published Oct. 24, 2002) (“Sloan”). Final Act. 5–14.

Claims 5 and 14 stand rejected under 35 U.S.C. § 103 as unpatentable over the combination of DeCenzo, Sloan, and Mahr et al. (US 2009/0006073 A1; published Jan. 1, 2009) (“Mahr”). Final Act. 14–16.

Claim 18 stands rejected under 35 U.S.C. § 103 as unpatentable over the combination of DeCenzo, Sloan, and Brunnett et al. (US 2008/0030888 A1; published Feb. 7, 2008) (“Brunnett”). Final Act. 16–17.

ANALYSIS

We have reviewed the rejections of claims 1–20 in light of Appellant’s arguments that the Examiner erred. We have considered in this

Decision only those arguments Appellant actually raised in the Briefs. Any other arguments Appellant could have made, but chose not to make, in the Briefs are waived. *See* 37 C.F.R. § 41.37(c)(1)(iv).

Appellant's arguments are not persuasive of error. We agree with and adopt as our own the Examiner's findings of facts and conclusions as set forth in the Answer and in the Action from which this appeal was taken. We provide the following explanation for emphasis.

Claims 1–11, 19, and 20

Appellant argues claims 1–11, 19, and 20 as a group. Appeal Br. 5. We select claim 1 as representative of the group, with claims 2–11, 19, and 20 standing or falling with claim 1. 37 C.F.R. § 41.37(c)(1)(iv).

With respect to independent claim 1, Appellant contends the cited portions of DeCenzo and Sloan do not teach or suggest a main driver circuit that is external to local driver circuits of a plurality of data storage devices. Appeal Br. 5. In particular, Appellant argues that “the ordinary artisan would not characterize a multiplexer in Sloan as the claimed driver circuit.” *Id.* at 6.

We are not persuaded that the Examiner erred. The Examiner found that DeCenzo teaches a plurality of storage devices (DeCenzo Figs. 2 and 3, ¶¶ 24–26), each comprising a local circuit for transferring data via plurality of individual data paths. Ans. 3. Thus, according to the Examiner, DeCenzo teaches all of the recited features of claim 1, except a circuit device external to the storage devices that allows concurrent writes to the storage devices via parallel interfaces. *Id.* The Examiner explained that, according to the Appellant's Specification, the main driver circuit in claim 1 is a preamplifier driver circuit configured as a multichannel multiplexer. *Id.* The Examiner

found that Sloan teaches a multiplexer circuit 156 that interacts with multiple driver circuits and plurality of heads 1–4 via parallel interfaces for streaming frequency write data. Ans. 3–4 (citing Sloan Fig. 5, ¶¶ 23, 24, 27–29); Final Act. 5.

Appellant has not persuasively rebutted the Examiner’s findings. Instead, Appellant argues in a conclusory manner that an artisan of ordinary skill would not “characterize a multiplexer in Sloan as the claimed driver circuit.” Appeal Br. 6. Rule 41.37 “require[s] more substantive arguments in an appeal brief than a mere recitation of the claim elements and a naked assertion that the corresponding elements were not found in the prior art.” *In re Lovin*, 652 F.3d 1349, 1357 (Fed. Cir. 2011). Moreover, the test for obviousness is not whether the claimed invention is expressly suggested in any one or all of the references, but whether the claimed subject matter would have been obvious to those of ordinary skill in the art in light of the combined teachings of those references. *See In re Keller*, 642 F.2d 413, 425 (CCPA 1981). Appellant does not specifically address the combined teachings of DeCenzo and Sloan cited by the Examiner. Instead, Appellant attacks DeCenzo and Sloan separately. *See* Appeal Br. 7. Nonobviousness, however, cannot be established by attacking the references individually when the rejection is predicated upon a combination of prior art disclosures. *See In re Merck & Co.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986).

Accordingly, we are not persuaded by Appellant’s argument that the Examiner erred in finding that the combination of DeCenzo and Sloan teaches or suggests the disputed limitation.

Appellant next contends the Examiner erred in combining the cited teachings of DeCenzo and Sloan. Appeal Br. 6. Appellant argues that,

because DeCenzo and Sloan are silent with respect to the claimed main and local driver circuit configuration that facilitates concurrent transfer of frequency modulated write data, “no ordinary artisan could find any reasonable motivation to alter and/or combine the cited references to arrive at the claimed subject matter.” *Id.* at 7.

We are not persuaded that the Examiner erred. The Supreme Court has rejected the rigid requirement of demonstrating a teaching, suggestion, or motivation to combine references in order to show obviousness. *See KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 419 (2007). Instead, a rejection based on obviousness only needs to be supported by “some articulated reasoning with some rational underpinning” to combine known elements in the manner required by the claim. *Id.* at 418. We find the Examiner provided “articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006); Final Act 5–6; Ans. 4.

Appellant next argues that the data storage subgroups of DeCenzo teach away from the use of a single disc drive of Sloan by exclusively teaching circuitry shared by multiple different data storage units. Appeal Br. 7 (citing DeCenzo Figs. 4 and 7, ¶¶ 27, 39).²

² Appellant also argues that Sloan teaches away from “the claimed subject matter,” referring to limitations recited in claim 1. Reply Br. 1. Appellant, however, has waived this argument because Appellant presented it for the first time in the Reply Brief, without a showing of good cause. *See* 37 C.F.R. § 41.41(b)(2) (2012); *accord Ex parte Borden*, 93 USPQ2d 1473, 1473–74 (BPAI 2010 (informative opinion) (“[T]he reply brief [is not] an opportunity to make arguments that could have been made in the principal brief on appeal to rebut the Examiner's rejections, but were not.”)).

Appellant's "teaching away" argument fails, however, because Appellant has not identified where DeCenzo actually criticizes, discredits, or otherwise discourages the claimed invention. *See In re Fulton*, 391 F.3d 1195, 1201 (Fed. Cir. 2004); *DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 567 F.3d 1314, 1327 (Fed. Cir. 2009) ("A reference does not teach away, however, if it merely expresses a general preference for an alternative invention but does not 'criticize, discredit, or otherwise discourage' investigation into the invention claimed.") (citing *Fulton*).

Moreover, it is well settled that "a determination of obviousness based on teachings from multiple references does not require an actual, physical substitution of elements." *In re Mouttet*, 686 F.3d 1322, 1332 (Fed. Cir. 2012). Nor is the test for obviousness whether a secondary reference's features can be bodily incorporated into the structure of the primary reference. *See Keller*, 642 F.2d at 425. The Supreme Court has held that "analysis need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ." *KSR*, 550 U.S. at 418.

Appellant's further contention that the Examiner engaged in "impermissible hindsight reconstruction" is also not persuasive. *See Appeal Br. 7*. The Examiner has set forth articulated reasoning with rational underpinnings for the combination, and Appellant has not identified any knowledge relied upon by the Examiner that was gleaned only from Appellant's disclosure and that was not otherwise within the level of ordinary skill in the art at the time of invention. *See In re McLaughlin*, 443 F.2d 1392, 1395 (CCPA 1971).

For these reasons, we are not persuaded that the Examiner erred in combining the cited teachings of DeCenzo and Sloan, or in the ultimate conclusion of obviousness.

Accordingly, we sustain the Examiner's § 103(a) rejection of independent claim 1, as well as the Examiner's § 103(a) rejection of independent claim 19 and dependent claims 2–11 and 20, argued as a group with claim 1.

Claims 12–18

Appellant argues claims 12–18 as a group. Appeal Br. 8. We select claim 12 as representative of the group, with claims 13–18 standing or falling with claim 12. 37 C.F.R. § 41.37(c)(1)(iv).

Appellant contends that the Examiner erred in rejecting claim 12 for obviousness because “Decenzo and Sloan fail to teach first and second driver circuits facilitating the streaming of frequency modulated write data to multiple data storage devices.” Appeal Br. 8.

For reasons similar to those discussed above for claim 1, we are not persuaded that the Examiner erred. The Examiner found that DeCenzo teaches a plurality of storage devices associated with a circuit board within housing 102. Ans. 5 (citing DeCenzo Figs. 1–3, ¶¶ 21 and 24). Thus, according to the Examiner, DeCenzo teaches all of the recited features of claim 12 except a circuit board including a read/write channel and a first preamplifier/driver circuit. *Id.* The Examiner found that Sloan teaches a preamplifier/driver circuit configured as a multichannel data multiplexer that transfer data to heads 1–4 via multiple parallel data paths. *Id.* at 6 (citing Sloan Fig. 5, ¶¶ 21, 23, and 27). Thus, the Examiner combined DeCenzo's

storage device 100, which is within housing 102, with Sloan's control board comprising a read/write channel and a first stage amplifier. *Id.*

Appellant has not persuasively rebutted the Examiner's findings. Again, the test for obviousness is not whether the claimed invention is expressly suggested in any one or all of the references, but whether the claimed subject matter would have been obvious to those of ordinary skill in the art in light of the combined teachings of those references. *See Keller*, 642 F.2d at 425. Appellant does not specifically address the combined teachings of DeCenzo and Sloan cited by the Examiner. Instead, Appellant attacks DeCenzo and Sloan separately. *See Appeal Br.* 8–9. Nonobviousness, however, cannot be established by attacking the references individually when the rejection is predicated upon a combination of prior art disclosures. *See Merck*, 800 F.2d at 1097.

Accordingly, we are not persuaded by Appellant's argument that the Examiner erred in finding that the combination of DeCenzo and Sloan teaches or suggests the disputed limitation of claim 12.

Appellant next argues that Sloan teaches away from the subject matter of claim 12. *Appeal Br.* 9.

Appellant's "teaching away" argument fails because Appellant has not identified where Sloan actually criticizes, discredits, or otherwise discourages the claimed multiple data storage devices contained within a single housing and connected to a control board comprising a preamplifier/driver circuit. *See Fulton*, 391 F.3d at 1201; *DePuy Spine*, 567 F.3d at 1327) (citing *Fulton*).

Appellant further argues that, because DeCenzo is silent with respect to, and Sloan teaches away from, the subject matter of claim 12, the

Examiner erred in combining the teachings of DeCenzo and Sloan. Appeal Br. 9.

We disagree because we find that the Examiner provided “articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *Kahn*, 441 F.3d at 988; Final Act 10–11; Ans. 6. Moreover, “a determination of obviousness based on teachings from multiple references does not require an actual, physical substitution of elements.” *Mouffet*, 686 F.3d at 1332. Nor is the test for obviousness whether a secondary reference’s features can be bodily incorporated into the structure of the primary reference. *See Keller*, 642 F.2d at 425. The Supreme Court has held that “analysis need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ.” *KSR*, 550 U.S. at 418.

For these reasons, we are not persuaded that the Examiner erred in combining the cited teachings of DeCenzo and Sloan, or in the ultimate conclusion of obviousness with regard to claim 12.

Accordingly, we sustain the Examiner’s § 103(a) rejection of independent claim 12, as well as the Examiner’s § 103(a) rejection of dependent claims 13–18, argued as a group with claim 12.

DECISION

We affirm the decision of the Examiner rejecting claims 1–20.

DECISION SUMMARY

Claims Rejected	35 U.S.C. §	Basis	Affirmed	Reversed
1-4, 6-13, 15-17, 19, 20	103(a)	DeCenzo Sloan	1-4, 6-13, 15-17, 19, 20	
5, 14	103(a)	DeCenzo Sloan Mahr	5, 14	
18	103(a)	DeCenzo Sloan Brunnett	18	
Overall Outcome:			1-20	

TIME PERIOD FOR RESPONSE

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

AFFIRMED