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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte JAVIER A. MORALES

Appeal 2017-006205
Application 13/584,785
Technology Center 2100

Before JOSEPH L. DIXON, JAMES R. HUGHES, and
MATTHEW J. McNEILL, *Administrative Patent Judges*.

HUGHES, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellant appeals under 35 U.S.C. § 134(a) from a rejection of claims 41–54. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

Appellant’s application relates to document printing, specifically, imposition and exception page programming for print jobs. Spec. ¶ 2. Imposition is the process of assigning individual pages of a print job to positions on a large sheet, for example, in an industrial printing operation where the sheet is then folded, cut, stacked, and bound. Spec. ¶ 29. Exception pages are those requiring special handling before imposition, for example, a simplex page in a print job that is to be duplex printed. Spec. ¶¶ 9, 29. Exception page programming causes a plex exception in such cases where pages with different plexes are to be imposed on the same sheet, and the plex exception can be resolved, for example, by adding a blank page onto the sheet opposite a simplex page in a duplex print job. Spec. ¶ 9. Claim 41, reproduced below, is illustrative of the claimed subject matter:

41. A document printing system that obtains a print job wherein:

the print job comprises an imposition specification, exception page programming, and a plurality of page descriptions specifying a plurality of pages;

the document printing system automatically flattens the print job, wherein the print job specifies a first plex, wherein the exception page programming specifies a second plex that is different from the first plex, wherein the specification of the second plex is a plex exception because the second plex is different from the first plex, wherein the document printing system detects the plex exception, wherein the document printing

system flattens the print job, wherein flattening the print job comprises resolving the plex exception, and wherein the document printing system produces a flattened print job;

the document printing system produces at least one imposed sheet definition by imposing the flattened print job to produce the at least one imposed sheet definition wherein the document printing system produces the flattened print job before the imposed sheet definition is produced; and

the document printing system produces a printed document by printing the at least one imposed sheet definition onto at least one sheet.

REFERENCES

The prior art relied upon by the Examiner in rejecting the claims on appeal is:

Hansen	US 6,462,756 B1	Oct. 8, 2002
Ryan	US 2002/0018235 A1	Feb. 14, 2002
Carlin	US 2002/0184324 A1	Dec. 5, 2002
Goel	US 2003/0020956 A1	Jan. 30, 2003
Sato	US 2005/0243372 A1	Nov. 3, 2005

Out of Hand Ltd, “Artwork Specifications,” January 18, 2006, available at https://web.archive.org/web/20060118085930/http://www.outofhand.co.uk/quicklink/artwork_specifications/ (hereinafter “Artwork Specifications”)

REJECTIONS

The Examiner made the following rejections:

Claims 41–54 stand rejected under 35 U.S.C. § 101 as directed to non-statutory subject matter.

Claims 41–48 stand rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement.

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Claims 41–54 stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite.

Claims 41–45 and 47 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Goel, Carlin, and Artwork Specifications.

Claim 44 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Goel, Carlin, Artwork Specifications, and Ryan.

Claim 46 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Goel, Carlin, Artwork Specifications, and Hansen.

Claim 48 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Goel, Carlin, Artwork Specifications, and Sato.

Claims 49, 50, 52, and 53 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Goel and Carlin.

Claims 51 and 54 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Goel, Carlin, and Sato.

ANALYSIS

The Non-Statutory Subject Matter Rejection

The Examiner finds independent claims 41 and 49 recite software *per se*, and thus neither claim is directed to a “process, machine, manufacture, or composition of matter” as defined in 35 U.S.C. §101. Final Act. 3–4.

Appellant contends the Examiner fails to consider the claim 41 and claim 49 limitations directed to physically printing onto sheets. App. Br. 10. We are persuaded by Appellant’s argument.

Claim 41 recites “the document printing system produces a printed document by printing the at least one imposed sheet definition onto at least one sheet” and claim 49 recites “the document printing system comprises a rendering device that produces a printed document by printing the at least

one imposed sheet definition onto at least one sheet.” Accordingly, claims 41 and 49 both require a system that can physically print a document, and are thus drawn to more than mere software *per se*, or mere transitory signals, as the Examiner finds. Ans. 9–10.

We are, therefore, persuaded the Examiner erred in rejecting claims 41–54 as being directed to non-statutory subject matter.

The Enablement Rejection

The Examiner finds independent claim 41 is not enabled because the Specification does not explain how to perform the limitation “wherein the document printing system flattens the print job, wherein flattening the print job comprises resolving the plex exception.” *See* Final Act. 5–6. Specifically, the Examiner interprets “flattening” to mean “removing the transparent elements within a document and creating a document with a single layer,” and finds one of ordinary skill would not have understood how to resolve a plex exception by removing transparencies in a document in view of the Specification. Final Act. 6. Appellant contends the Examiner relies on an incorrect definition of the term “flattening.” App. Br. 11. We are persuaded by Appellant’s argument.

The Examiner’s definition of “flattening” is inapposite to the present application. Claim 41 itself defines “flattening” by reciting “wherein flattening the print job comprises *resolving the plex exception*.” (emphasis added). The Specification provides this same definition: “If print job [] 103 is suitable for flattening, then the flattening module 107 can flatten it by *resolving the plex exceptions* 122 to produce a flattened print job 108” Spec. ¶ 31 (emphasis added). Moreover, the Specification describes how to flatten a print job by resolving a plex exception, for example: “Fig. 10

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illustrates a high level flow diagram of rules being applied to flatten a print job in accordance with aspects of the embodiments. Note that certain of the illustrated rules assume two sided or duplex printing. . . . If the exception page is a simplex page 1004, then a blank page can be inserted after the simplex page 1005.” Spec. ¶ 41. Accordingly, we conclude the disputed limitation in claim 41 is properly enabled because the Specification describes how to flatten a print job in at least one embodiment by adding a blank page when there is a plex exception.

We are, therefore, persuaded the Examiner erred in rejecting claims 41–48 as failing to comply with the enablement requirement.

The Indefiniteness Rejection

Regarding independent claims 41 and 49, “[t]he Examiner is unable to determine what structure or feature of the document printing system would perform each of the individual functions claimed. Therefore, the Examiner cannot determine the metes and bounds of the claimed invention, rendering it indefinite.” Final Act. 6–7. Further, with respect to claim 41, the Examiner finds “[t]he term ‘flattening’ is used by the claim to mean ‘resolving a plex exception’ while the accepted meaning is ‘to combine all elements of a graphic into a single layer.’ The term is indefinite because the specification does not clearly redefine the term.” Final Act. 7. Appellant contends there is no lack of clarity as to the metes and bounds of claims 41 and 49, and that the definition of the term “flatten” as used in claim 41 is clear. App. Br. 13. We are persuaded by Appellant’s arguments.

First, we note that the features of an apparatus claim may be recited either structurally or functionally. *In re Schreiber*, 128 F.3d 1473, 1478 (Fed. Cir. 1997). “Functional claim language that is not limited to a specific

structure covers all devices that are capable of performing the recited function.” MPEP § 2114(IV). Accordingly, a functional limitation in an apparatus claim may be interpreted broadly if not limited to a specific structure for performing the particular function. However, “breadth is not to be equated with indefiniteness.” *In re Miller*, 441 F.2d 689, 693 (CCPA 1971). Here, both claims 41 and 49 are drawn to “A document printing system,” where the system is recited as performing various functions. The Specification provides that the described embodiments can be implemented as modules that can be software or hardware-based. Spec. ¶ 44. However, both claims 41 and 49 require the “document printing system” to be capable of physically printing a document, as noted above with respect to the non-statutory subject matter rejection, and thus claims 41 and 49 cannot be read to cover software alone. Accordingly, when read in light of the Specification, the claimed “document printing system” covers generic hardware or hardware and software combinations that are capable of performing the claimed functions. Although the structure required for claims 41 and 49 are broadly interpreted to cover generic hardware or hardware and software combinations, this breadth does not equal indefiniteness. Thus, we agree with Appellant that the metes and bounds of claims 41 and 49 are not unclear despite their breadth in defining the required structure to perform the functional limitations.¹

¹ We make no finding here on whether the full breadth of the functional limitations in claims 41 and 49 are properly enabled, aside from the narrow issue discussed above of whether claim 41 is enabled with respect to the “flattening” feature. *See In re Borkowski*, 422 F.2d 904, 908–909 (CCPA 1970) (finding undue breadth of a claim is an issue of enablement, not definiteness).

Second, as discussed above regarding the enablement rejection, the Examiner relies on an incorrect definition of the term “flattening,” contrary to the explicit definition recited in claim 41 and provided in the Specification, namely, that “flattening” means resolving a plex exception. Accordingly, claim 41 is not indefinite for lack of clarity with respect to the term “flattening.”

We are, therefore, persuaded the Examiner erred in rejecting claims 41–54 as being indefinite.

The Obviousness Rejections

Claims 41 and 49

Appellant contends Goel fails to teach exception page programming as recited in claims 41 and 49 because Goel’s mixed page mode does not relate to handling pages with different plexes, but rather pages of varying dimension or orientation. App. Br. 15–16. Appellant also contends Goel does not teach flattening a print job by resolving a plex exception before imposing a print job. App. Br. 16–18.

Appellant contends Carlin also fails to teach resolving a plex exception. App. Br. 18–21; Reply Br. 6–7. Specifically, Appellant argues that “*Carlin* explains that part of the commingling process can include the insertion of blank pages after pages that are to be printed simplex. Note that the commingled print file never contains a plex exception because it is assembled with all sheets having the same plex.” App. Br. 20. Further, Appellant argues that “*Carlin* describes assembling documents with some

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documents simplex, other documents duplex, but describes no document as both simplex and duplex.” App. Br. 21.

Further, Appellant contends Goel and Carlin cannot be combined because it would change Goel’s principle of operation, and moreover, contends that such combination would not read on claims 41 and 49. We are not persuaded by Appellant’s arguments.

Although Appellant argues that Goel does not teach exception page programming and resolving a plex exception, we do not address these arguments because the Examiner finds Carlin teaches these features (*see* Final Act. 9–10; Ans. 23, 25–27, 30), and we are not persuaded by Appellant’s arguments regarding Carlin.

Carlin discloses the following with respect to a commingled print file assembled from multiple individual jobs:

Another important function advantageously performed at this point is page insertion. Because some mail jobs from some customers require only simplex printing (printing on only one side of a page) while other mail jobs require duplex printing (printing on both sides of a page), and because these jobs are being commingled, it may be necessary to insert a blank page after simplex page images to ensure that the next page image in the print file does not print on the back of the previous page.

Carlin, ¶ 51. We agree with the Examiner that here Carlin teaches both “the exception page programming specifies a second plex that is different from the first plex” and “the document printing system flattens the print job, wherein flattening the print job comprises resolving the plex exception.” Final Act. 9–10. That is, as quoted above, Carlin identifies that the print file specifies both simplex and duplex printing—“specifies a second plex that is different form the first plex”—and adds a blank page where necessary to

ensure the print file as a whole is properly printed—“resolv[es] the plex exception.”

We are also not persuaded by Appellant’s arguments that combining Carlin with Goel would change the principle of operation of Goel. App. Br. 21. The Examiner does not propose changing Goel’s principle of operation; rather, the Examiner’s combination adds Carlin’s functionality of resolving a plex exception to Goel’s system that imposes a print job (*see* Final Act. 8–10, 12–14). In this combination, Goel’s functionality of imposing a print job would remain intact. Further, Appellant’s argument that the combination does not teach resolving a plex exception (App. Br. 21–22) is not persuasive because we find Carlin discloses this feature, as discussed above.

Additionally, we are also not persuaded by Appellant’s arguments against Artwork Specifications as applied to claim 41 (*see* App. Br. 22–23) because we find the Examiner’s reliance on this reference is merely cumulative. As discussed above regarding the enablement rejection, we disagree with the Examiner’s interpretation of the claim 41 term “flattening.” The Examiner relied on Artwork Specifications for disclosing the “flattening” limitation under the Examiner’s erroneous interpretation. *See* Final Act. 14–15. As already discussed, we agree with Appellant’s definition that “flattening” means resolving a plex exception. *See* App. Br. 11. We find Carlin discloses this limitation for the reasons presented above.

We are, therefore, not persuaded the Examiner erred in rejecting claims 41–44 and 47 as obvious over Goel, Carlin, and Artwork Specifications, and claims 49, 50, and 52 as obvious over Goel and Carlin.

Claim 44

Appellant contends Ryan does not teach exception page programming directed to the media weight of an exception page. App. Br. 26. Appellant also contends there is no rational basis for combining Ryan with the other references. *Id.* We are not persuaded by Appellant’s arguments.

The limitation “exception page programming is directed to the media weight of at least one exception page” does not add any further structural or functional requirements to claim 44, and we thus do not give this limitation patentable weight. Nevertheless, even if we were to consider the “media weight” limitation, Appellant admits as prior art that exception page programming can specify an exception page based on media weight. *See* Spec. ¶ 37. Moreover, the Examiner also separately rejected claim 44 over Goel, Carlin, and Artwork Specifications, without Ryan (Final Act. 17–18), and Appellant has not provided arguments showing claim 44 to be patentable over that base combination. Accordingly, the Examiner’s reliance on Ryan is merely cumulative to the combination of Goel, Carlin, and Artwork Specifications.

We are, therefore, not persuaded the Examiner erred in rejecting claim 44 as obvious over Goel, Carlin, Artwork Specifications, and Ryan.

Claim 45

Appellant contends Goel does not teach a configuration rule for use by a document printing system. App. Br. 27. Specifically, Appellant argues Goel’s “GUI entries are per-job selections, not rules that the document printing system uses.” *Id.* We disagree with Appellant.

As the Examiner finds (Final Act. 18; Ans. 41–42), Goel discloses entering sheet settings, for example, size, creep adjustment, or orientation.

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Goel, ¶ 50. We agree with the Examiner that Goel’s sheet settings are “configuration rule[s]” because they are attributes that, “when selected, cause an effect to occur such as to change the size of the page or its orientation.” Ans. 41–42.

We are, therefore, not persuaded the Examiner erred in rejecting claim 45 as obvious over Goel, Carlin, and Artwork Specifications.

Claim 46

Appellant contends Hansen does not teach a media programming difference selected from the group of color, coating, and sides coated because Hansen merely mentions color as an attribute. App. Br. 26–27. Appellant also contends there is no rational basis for combining Hansen with the other references. App. Br. 27. We are not persuaded by Appellant’s arguments.

The Examiner relies on the combination of references to teach the argued limitation. Specifically, Goel teaches an attribute can be different for different pages on a sheet (Goel, ¶¶ 32–33), and Hansen teaches color as an attribute. Hansen, col. 12, ll. 28–35. Moreover, Appellant’s Specification admits as prior art that color is a variable media type attribute. *See* Spec. ¶ 34. Further, Appellant does not specifically explain which particular references are not combinable and why they are not combinable. *See* App. Br. 27.

We are, therefore, not persuaded the Examiner erred in rejecting claim 46 as obvious over Goel, Carlin, Artwork Specifications, and Hansen.

Claim 48

Appellant contends Sato does not teach a chapter start can be an exception page. App. Br. 23–24. However, the claim 48 limitation “at least one exception page that is a chapter start” does not require any additional structure or functionality, and therefore, we do not give this limitation patentable weight. Nevertheless, as the Examiner finds (Ans. 34), an exception page being a chapter start is admitted as prior art. *See Spec.* ¶ 37.

We are, therefore, not persuaded the Examiner erred in rejecting claim 48 as obvious over Goel, Carlin, Artwork Specifications, and Sato.

Claim 51

Appellant contends Sato does not teach inserting a blank page at the position of a cover page that is an exception page. App. Br. 24–25. However, as discussed above, Carlin discloses inserting a page to resolve a plex exception (*see* Carlin, ¶ 51). That the page is inserted at the position of a cover page does not further structurally or functionally limit the claim, and is therefore not due patentable weight. Nevertheless, an exception page being a cover page, i.e., inside or outside cover, is admitted as prior art in Appellant’s Specification. *See Spec.* ¶ 37.

We are, therefore, not persuaded the Examiner erred in rejecting claim 51 as obvious over Goel, Carlin, and Sato.

Claim 53

Appellant contends Goel does not teach inserting blank pages at the location of an insert. App. Br. 27–28. The Examiner finds Carlin teaches inserting a blank page to resolve a plex exception, and that it would have been obvious to modify Carlin by allowing multiple pages to be inserted, in

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view of Goel's teaching of inserting a whole sheet. Ans. 42–43; Carlin, ¶ 51; Goel, Fig. 11. Appellant has not specifically rebutted this finding by the Examiner. *See* Reply Br. 1–7.

We are, therefore, not persuaded the Examiner erred in rejecting claim 53 as obvious over Goel and Carlin.

Claim 54

Appellant contends Sato does not teach detecting a chapter start with an even page number, and inserting a blank page before the chapter start page such that the page number becomes odd. App. Br. 25. We are not persuaded by Appellant's argument.

We first note that whether a detected page is a chapter start does not further structurally or functionally limit claim 54, and thus we do not give this feature patentable weight. Nevertheless, even if we consider the chapter start limitation, we find Appellant admits as prior art that a chapter start can be an exception page. *See* Spec. ¶37. Further, we agree with the Examiner that the natural result of inserting a page before a certain page that was originally even-numbered would make the original page odd-numbered. Ans. 37. Thus, in view of Carlin's teaching of inserting a page when a particular portion of a document is to be simplex printed, i.e., when there is an exception (Carlin, ¶ 51), it would have been obvious to insert a page at the location of an even-numbered chapter start, which would then become an odd-numbered chapter start. Accordingly, the Examiner's reliance on Sato is merely cumulative, and Appellant's argument that Sato alone fails to teach the limitations of claim 54 (*see* App. Br. 25) is not persuasive.

We are, therefore, not persuaded the Examiner erred in rejecting claim 54 as obvious over Goel, Carlin, and Sato.

CONCLUSIONS

Under 35 U.S.C. § 101, the Examiner erred in rejecting claims 41–54.

Under 35 U.S.C. § 112, first paragraph, the Examiner erred in rejecting claims 41–48.

Under 35 U.S.C. § 112, second paragraph, the Examiner erred in rejecting claims 41–54.

Under 35 U.S.C. § 103(a), the Examiner did not erred in rejecting claims 41–54.

DECISION

The Examiner’s decision to reject claims 41–54 is affirmed. *See* 37 C.F.R. § 41.50(a)(1) (“The affirmance of the rejection of a claim on any of the grounds specified constitutes a general affirmance of the decision of the examiner on that claim, except as to any ground specifically reversed.”).

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