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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte DOUGLAS J. MELLOR and DANIEL L. GEORGE¹

Appeal 2010-006576
Application 10/875,043
Technology Center 2600

Before JEAN R. HOMERE, TREVOR M. JEFFERSON, and
LARRY J. HUME, *Administrative Patent Judges*.

HUME, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134(a) of the Final Rejection of claims 1-7, 10, 13-26, 29, 32-41, 44, and 47-54. Claims 8, 9, 11, 12, 27, 28, 30, 31, 42, 43, 45, and 46 have been cancelled. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

¹ The Real Party in Interest is Hewlett-Packard Development Company, LP.

STATEMENT OF THE CASE ²

The Invention

Appellants' invention is directed to systems, methods, and computer readable media for estimating a composition time for assembling a print job. Spec. p. 1 (Title), and Abstract.

Exemplary Claims

Claim 1 is an exemplary claim representing an aspect of the invention which is reproduced below (*emphasis* added):

1. An estimation method to be executed in an image forming device, comprising:

identifying a timing factor for a print job at a processor of the image forming device, the timing factor corresponding to at least one from a set of:

an interface used to stream printing instructions to the image forming device,

a characteristic of the print job comprising one from a set of a vector dominated, a bitmap dominated, and a text dominated print job, wherein the bitmap dominated print job taking longer to compose than either of the text and the vector dominated print job, and

² Our decision refers to Appellants' Appeal Brief ("App. Br.," filed Sep. 30, 2009); Reply Brief ("Reply Br.," filed Feb. 20, 2010); Examiner's Answer ("Ans.," mailed Dec. 24, 2009); Supplemental Examiner's Answer in response to Reply Brief ("Suppl. Ans." mailed Apr. 15, 2010); Final Office Action ("FOA," mailed Apr. 30, 2009); and the original Specification ("Spec.," filed June 23, 2004).

a composition option selected for the print job comprising at least one from a set of an “N into one” page composition, a page rotation and a border erase; and

estimating, based on the timing factor, a composition time for assembling the print job to be formatted at the processor of the image forming device, the print job being assembled from the printing instructions or assembled from a scanned image generated by the image forming device;

wherein estimating comprises:

acquiring timing data corresponding to the timing factor, the timing data including a maximum composition time and an average composition time; and

providing the maximum composition time and the average composition time.

Claim 10 is an exemplary claim representing an aspect of the invention which is reproduced below (*emphasis* added):

10. A method to be executed by a processor of an image forming device, comprising:

identifying a first timing factor for a first print job by an estimation module executed at the processor of the image forming device, the first timing factor corresponding to at least one from a set of:

an interface used to stream printing instructions to the image forming device,

a characteristic of the first print job comprising one from a set of a vector dominated, a bitmap dominated, and a text dominated first print job, wherein the bitmap dominated first print job taking longer to compose than either of the text and the vector dominated first print job, and

a composition option selected for the first print job comprising at least one from a set of an “N into one” page composition, a page rotation, and a border erase;

monitoring an actual composition time for assembling the first print job so the first print job can be formatted, the first print job being assembled from the printing instructions or assembled from a scanned image generated by the image forming device;

updating first timing data corresponding to the first timing factor to reflect the actual time required to compose the first print job;

identifying a second timing factor for a second print job, the second timing factor corresponding to one of an interface used to stream printing instructions to an image forming device and a composition option selected for the second print job; and

estimating a composition time for assembling the second print job by the estimation module, *the estimated composition time being an estimated time for assembling the second print job from printing instructions streamed to the image forming device* or for assembling the print job from a scanned image generated by the image forming device,

wherein estimating comprises:

obtaining second timing data corresponding to the second timing factor, the second timing data including a maximum composition time and an average composition time; and

providing the maximum composition time and the average composition time corresponding to the second timing data.

Claim 14 is an exemplary claim representing an aspect of the invention which is reproduced below (*emphasis* added):

14. A method for producing a print job to be executed by an image forming device; comprising:

identifying a timing factor for a print job, the timing factor corresponding to at least one from a set of:

an interface used to stream printing instructions to the image forming device,

a characteristic of the print job comprising one from a set of a vector dominated, a bitmap dominated, and a text dominated print job,

wherein the bitmap dominated print job taking longer to compose than one from a set of the text and the vector dominated print job, and

a composition option selected for the print job comprising at least one from a set of an “N into one” page composition, a page rotation, and a border erase;

estimating a composition time for assembling the print job and a format time for formatting the print job, the composition time being based at least in part on the timing factor, wherein estimating comprises acquiring timing data corresponding to the timing factor, the timing data including a maximum composition time and an average composition time, and providing the maximum composition time and the average composition time;

assembling the print job, the print job being assembled from the printing instructions or assembled from a scanned image generated by the image forming device;

formatting the print job;

initiating a warm-up process for a print engine according to the estimated format time and a selected one of

the average composition time and maximum composition time so the warm-up process is scheduled to complete as at least a portion of the print job is formatted and in condition to be printed; and

directing the print engine to begin producing the formatted print job once the warm-up process is complete.

Prior Art

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

Mitsubishi	US 5,274,461	Dec. 28, 1993
Salgado	US 5,579,447	Nov. 26, 1996
Sela	US 5,913,018	June 15, 1999
Yamaguchi	US 2003/0002056 A1	Jan. 2, 2003
Murphy	US 6,661,531 B1	Dec. 9, 2003

Rejections on Appeal

A. Claims 1, 20, 39, and 53 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Yamaguchi and Salgado in view of Sela. Ans. 3.

B. Claims 2-7, 14-19, 21-26, 33-38, 40, 41, 48-52, and 54 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Yamaguchi, Salgado, and Sela in view of Mitsubishi. Ans. 9.

C. Claims 10, 13, 29, 32, 44, and 47 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Yamaguchi, Salgado, and Murphy in view of Sela. Ans. 37.

GROUPING OF CLAIMS

Based upon Appellants' arguments against the final rejections and the separate arguments for patentability set forth with respect to the rejection of claims 1, 10, and 14, (App. Br. 19-23; Reply Br. 1-3), and based upon our authority under 37 C.F.R. §41.37(c)(1)(vii), we select the following representative claims to decide this appeal in accordance with those arguments and rejections:

- A. Claim 1: Claims 20, 39, and 53 stand or fall together with independent claim 1. (*See* App. Br. 19-20).
- B. Claim 14: Claims 2-7, 15-19, 21-26, 33-38, 40-41, 48-52, and 54 stand or fall together with independent claim 14. (*See* App. Br. 21-22).
- C. Claim 10: Claims 13, 29, 32, 44, and 47 stand or fall together with independent claim 10. (*See* App. Br. 22-23).

ISSUES AND ANALYSIS

We have reviewed the Examiner's rejections in light of Appellants' arguments that the Examiner has erred. We disagree with Appellants' conclusions with respect to claims 1, 10, and 14, and we adopt as our own (1) the findings and reasons set forth by the Examiner in the action from which this appeal is taken and (2) the reasons and rebuttals set forth in the Examiner's Answer in response to Appellants' Arguments. However, we highlight and address specific findings and arguments regarding claims 1, 10, and 14 for emphasis, as discussed below.

A. 35 U.S.C. § 103(a): Claims 1, 20, 39, and 53

Issue 1

Appellants' contentions (App. Br. 19-20; Reply Br. 1-3) present us with the following issue:

Did the Examiner err in finding that the combination of Yamaguchi and Salgado in view of Sela teaches or suggests Appellants' claimed method to be executed in an image forming device, and which includes, *inter alia*, "identifying a timing factor for a print job at a processor of the image forming device, the timing factor corresponding to at least one from a set of: an interface used to stream printing instructions to the image forming device . . . and estimating, based on the timing factor, a composition time for assembling the print job to be formatted at the processor of the image forming device, the print job being assembled from the printing instructions or assembled from a scanned image generated by the image forming device; wherein estimating comprises: acquiring timing data corresponding to the timing factor, the timing data including a maximum composition time and an average composition time; and providing the maximum composition time and the average composition time," as recited in independent claim 1?

Analysis

We agree with the Examiner's finding that Yamaguchi and Salgado in view of Sela teach or suggest all the limitations of claim 1. Ans. 3-5 and 44-48.

In particular, we agree with the Examiner that "Appellant's claims do not require a timing factor from every set identified to be included in all cases nor [that] a plurality of timing factors . . . [is] required." Ans. 45.

We also agree with the Examiner that Yamaguchi teaches or suggests a printing estimation method using “**at least one** of the factors from at least one of the claimed sets,” but that Yamaguchi, while providing an estimation time, does not teach or suggest that the time is provided as a range such as a maximum and average composition time. Ans. 46 (**emphasis** in original).

We further agree with the Examiner that “Salgado discloses ‘reference system includes one of plural tools necessary to estimate the time required to perform a given image processing operation, such as resolution conversion or image rotation’ where these factors are included in the estimation of the print time.” Ans. 46, citing Salgado at col. 7:25-36 (emphasis omitted).

We also agree with the Examiner’s finding that Sela teaches computing, for each rendering band, a cost to provide a maximum and nominal estimation using data provided in the PDL commands presented. Ans. 47 (citing Sela col. 6:63 through col. 7:3).

In response to Appellants’ contention (Reply Br. 2) that the “nominal” time as cited in Sela is not equivalent to the “average” time recited in the claims, we agree with the Examiner’s finding that Sela uses the word “nominal” in a manner that demonstrates it is clearly determining median values (determining minimum and maximum values and their span). Suppl. Ans. 2, citing Sela Fig. 4 and col. 7:4 through col. 8:59. Thus, we find that Sela teaches or suggests Appellants’ recitation in claim 1 of “the timing data including a maximum composition time and an average composition time.”

In further response to Appellants’ contentions regarding the differences between “nominal time” and “average time,” as well as the

purported lack of an “articulated reasoning with rational underpinnings to support the conclusion of *prima facie* obviousness,” (Reply Br. 1-3), we note that these arguments, even if persuasive, were not timely presented.

Appellants have not explained why, nor is it apparent that a new argument in the Answer or any other circumstance constituting “good cause” for its belated presentation necessitated these arguments. *See Ex parte Borden*, 93 USPQ2d 1473, 1473-74 (BPAI 2010) (“informative”) (absent a showing of good cause, the Board is not required to address argument in Reply Brief that could have been presented in the principal Brief).

Appellants present new arguments not raised in the Briefs before the Board, because the original argument raised in Appellants’ Appeal Brief only addressed the claim limitation “acquiring timing data corresponding to the timing factor, the timing data including a maximum composition time and an average composition time,” as recited in claim 1. App. Br. 19-20.

The Examiner’s characterization of the cited art was not substantively changed between the Final Office Action (*see* FOA 5) and the Examiner’s Answer (*see* Ans. 4). In addition, the Examiner originally articulated and maintained the motivation to combine Yamaguchi with Salgado and Sela (*see* FOA 6 and Ans. 5). Such new arguments directed to these findings by the Examiner will not be considered. (“Arguments not raised in the briefs before the Board and evidence not previously relied upon in the brief and any reply brief(s) are not permitted in the request for rehearing except as permitted by paragraphs (a)(2) and (a)(3) of this section.” 37 C.F.R. § 41.52(a)(1)). Appellants have not identified a reason for meeting one of these exceptions.

Accordingly, Appellants have not convinced us of any error in the Examiner's characterization of the cited art and related claim construction and we therefore sustain the Examiner's unpatentability rejection of independent claim 1. Since Appellants have not provided separate arguments for patentability with respect to independent claims 20, 39, and 53, we similarly sustain the Examiner's unpatentability rejection of these claims under 35 U.S.C. § 103(a) over Yamaguchi and Salgado in view of Sela.

B. 35 U.S.C. § 103(a): Claims 2-7, 14-19, 21-26, 33-38, 40-41, 48-52, and 54

Issue 2

Appellants' contentions (App. Br. 21-22; Reply Br. 1-3) present us with the following issues:

Did the Examiner err in finding that the combination of Yamaguchi, Salgado and Sela in view of Mitsuhashi teaches or suggests Appellants' claimed method for producing a print job to be executed by an image forming device which includes, *inter alia*, the limitations regarding timing factors in Issue 1, *supra*, as well as the additional limitations of ". . . initiating a warm-up process for a print engine according to the estimated format time and a selected one of the average composition time and maximum composition time so the warm-up process is scheduled to complete as at least a portion of the print job is formatted and in condition to be printed; and directing the print engine to begin producing the formatted print job once the warm-up process is complete," as recited in independent claim 14?

Analysis

We agree with the Examiner's finding that Yamaguchi, Salgado and Sela in view of Mitsuhashi teaches or suggests all the recited limitations of claim 14. Ans. 15-17 and 48-54.

Appellants correctly argue that claim 14 at least includes the timing factor features of claim 1, discussed in Issue 1, *supra*, and additionally includes the limitations of "initiating a warm-up process for a print engine according to the estimated format time and a selected one of the average composition time and maximum composition time so the warm-up process is scheduled to complete as at least a portion of the print job is formatted and in condition to be printed and directing the print engine to begin producing the formatted print job once the warm-up process is complete." App. Br. 21.

However, as discussed above with respect to Issue 1, we find that the combination of Yamaguchi, Salgado and Sela teaches or suggests the limitations relating to the timing factors, i.e., the maximum composition time and the average composition time, discussed above with respect to independent claim 1.

Further, we agree with the Examiner that Mitsuhashi teaches or suggests the further limitations of claim 14 related to scheduling a warm-up process for a print engine, as recited in claim 14, i.e., "initiating a warm-up process for a print engine according to the estimated format time and a selected one of the average composition time and maximum composition time so the warm-up process is scheduled to complete as at least a portion of the print job is formatted and in condition to be printed; and directing the

print engine to begin producing the formatted print job once the warm-up process is complete,” Ans. 10 (citing Mitsubishi col. 1:68 through col. 2:2 and 2:63-66) and Ans. 52-54).

As noted above in the discussion of claim 1, *supra*, Appellants’ arguments presented in the Reply Brief with respect to “nominal time” and “average time,” as well as arguments directed to the allegedly deficient motivation to combine the references in the manner suggested were not timely presented.

Accordingly, Appellants have not convinced us of any error in the Examiner’s characterization of the cited art and related claim construction and we therefore sustain the Examiner’s unpatentability rejection of independent claim 14. Since Appellants have not provided separate arguments for patentability with respect to independent claims 33, 48, and 54, or dependent claims 2-7, 15-19, 21-26, 34-38, 40-41, and 49-52, we similarly sustain the Examiner’s unpatentability rejection of these claims under 35 U.S.C. § 103(a) over Yamaguchi, Salgado and Sela in view of Mitsubishi.

C. 35 U.S.C. § 103(a): Claims 10, 13, 29, 32, 44, and 47

Issue 3

Appellants’ contentions (App. Br. 22-23; Reply Br. 1-3) present us with the following issues:

Did the Examiner err in finding that the combination of Yamaguchi, Salgado, and Murphy in view of Sela teaches or suggests Appellants’ claimed method to be executed by a processor of an image forming device which includes, *inter*

alia, the timing factor features in Issue 1, discussed *supra* with respect to claim 1, as well as the additional limitations of “monitoring an actual composition time for assembling the first print job so the first print job can be formatted . . . updating first timing data corresponding to the first timing factor to reflect the actual time required to compose the first print job; identifying a second timing factor for a second print job . . . and estimating a composition time for assembling the second print job . . . the estimated composition time being an estimated time for assembling the second print job from printing instructions streamed to the image forming device . . . wherein estimating comprises: obtaining second timing data corresponding to the second timing factor, the second timing data including a maximum composition time and an average composition time; and providing the maximum composition time and the average composition time corresponding to the second timing data,” as recited by independent claim 10?

Analysis

In particular, we concur with the Examiner’s finding that the combination of Yamaguchi, Salgado, and Murphy in view of Sela teaches or suggests all the limitations of claim 10. Ans. 37-39 and 54-61.

Appellants correctly point out that claim 10 at least includes the timing factor features of claim 1, discussed in Issue 1, *supra*, and which additionally includes the limitations of:

monitoring an actual composition time for assembling the first print job so the first print job can be formatted . . . updating first timing data corresponding to the first timing factor to reflect the actual time required to compose the first print job; identifying a second timing factor for a second print job . . . and estimating a composition time for assembling the second print job . . . the estimated composition time being an estimated time for assembling the second print job from printing instructions streamed to the image forming device . . . wherein estimating

comprises: obtaining second timing data corresponding to the second timing factor, the second timing data including a maximum composition time and an average composition time; and providing the maximum composition time and the average composition time corresponding to the second timing data.

App. Br. 22.

We find that the combination of Yamaguchi, Salgado and Sela teaches or suggests the limitations relating to the recited timing factors, i.e., maximum composition time and the average composition time, as discussed above in Issue 1 with respect to independent claim 1.

With respect to the further limitations of claim 10, we also agree with the Examiner that Murphy teaches or suggests using actual or estimated methods to determine transfer time of the image data as well as details of the print data from the host to the printing system to provide an estimate of the time to print a page. Ans. 39 (citing Murphy col. 4:20-53) and Ans. 60-61.

As noted above in the discussion of claim 1, *supra*, Appellants' arguments presented in the Reply Brief with respect to "nominal time" and "average time," as well as arguments directed to the allegedly deficient motivation to combine the references in the manner suggested were not timely presented.

Accordingly, Appellants have not convinced us of any error in the Examiner's characterization of the cited art and related claim construction and we therefore sustain the Examiner's unpatentability rejection of independent claim 10. Since Appellants have not provided separate arguments for patentability with respect to independent claims 29 and 44, or

dependent claims 13, 32, and 47, we similarly sustain the Examiner's unpatentability rejection of these claims under 35 U.S.C. § 103(a) over Yamaguchi, Salgado, and Murphy in view of Sela.

CONCLUSIONS

(1) Appellants have not established that the Examiner erred with respect to the various unpatentability rejections of claims 1-7, 10, 13-26, 29, 32-41, 44, and 47-54 under 35 U.S.C. § 103(a), and the rejections are sustained.

(2) Appellants' arguments in the Reply Brief related to the purported differences between "nominal time" and "average time," as well as the alleged lack of an articulated reasoning with rational underpinnings to support the conclusion of prima facie obviousness, even if persuasive, were not timely presented.

DECISION

The decision of the Examiner to reject claims 1-7, 10, 13-26, 29, 32-41, 44, and 47-54 is affirmed.

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

ELD