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Tarolli, Sundheim, Covell & Tummino LLP and Northrop Grumman Systems Corporation 1300 East Ninth Street Suite 1700 Cleveland, OH 44114			MAZUMDER, SAPTARSHI	
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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* HENRY H. FUNG, WAYNE S. KIM,  
DEVANG R. PAREKH, LOUIS A. ODDO, FENG CAO,  
MICHEL AZAR, and BENJAMIN J. MONTGOMERY

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Appeal 2019-001748  
Application 15/047,301  
Technology Center 2600

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Before BRYAN F. MOORE, MATTHEW J. McNEILL, and  
JASON M. REPKO, *Administrative Patent Judges*.

MOORE, *Administrative Patent Judge*.

DECISION ON APPEAL

Pursuant to 35 U.S.C. § 134(a), Appellant<sup>1</sup> appeals from the Examiner's decision to reject claims 1–20, which are all claims pending in the application. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm-in-part.

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<sup>1</sup> We use the word “Appellant” to refer to “[A]pplicant” as defined in 37 C.F.R. § 1.42(a). Appellant identifies the real party in interest as Northrop Grumman Corporation. Appeal Br. 3.

## BACKGROUND<sup>2</sup>

Appellant's disclosed embodiments and claimed invention relate to "federated system management, and specifically to a mission monitoring system." Spec. ¶ 1. Claim 1, reproduced below, is illustrative of the subject matter on appeal (*emphasis* added to contested prior-art limitation):

1. A mission monitoring system comprising:
  - a data store to store map data associated with a geographic region of interest and a plurality of graphical elements corresponding to at least one mission asset and to mission constraints, wherein each of the plurality of graphical elements comprises a layer assignment associated with one of a plurality of graphical layers;
  - a human-machine interface (HMI) to facilitate user inputs to selectively activate the plurality of graphical layers associated with the plurality of graphical elements and to display a graphical rendering of the selectively activated graphical layers superimposed over a graphical virtual environment of the geographic region of interest via a display system; and
  - a performance monitor to provide graphical feedback of the graphical rendering rate of the display system based on the selective activation and deactivation of the plurality of graphical layers associated with the plurality of graphical elements.*

Appeal Br. 24 (Claims App.).

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<sup>2</sup> Throughout this Decision, we have considered the Specification filed February 18, 2016 ("Spec."), the Final Office Action mailed January 11, 2018 ("Final Act."), the Advisory Action mailed April 9, 2018 ("Advisory Act."), the Appeal Brief filed June 11, 2018 ("Appeal Br.") (as supplemented by the Response to Notice of Noncompliant Appeal Brief, filed July 16, 2018), the Examiner's Answer mailed October 19, 2018 ("Ans."), and the Reply Brief filed December 19, 2018 ("Reply Br.").

## REJECTION

Claim 10 stands rejected under 35 U.S.C. § 112(b) as being indefinite for failing to particularly point out and distinctly claim the subject matter which the inventor or a joint inventor regards as the invention. Advisory Act. 2.

Claims 11, 13–15, and 17 stand rejected under 35 U.S.C. § 101 as being directed to patent-ineligible subject matter. Final Act. 9–14.

Claims 1, 2, 4, 5, 9, 10, and 18 have been rejected under 35 U.S.C. § 103 as allegedly being obvious over Tieftrunk et al. (US 2016/0057032; published Feb. 25, 2016 (“Tieftrunk”)) in view of Deering et al. (US 6,313,838 B1; issued Nov. 6, 2001 (“Deering”)). Final Act. 14–29.

Claims 3 and 19 have been rejected under 35 U.S.C. § 103 as allegedly being obvious over Tieftrunk and Deering, and in further view of Jordan: “A Dynamically Linked Checkbox Matrix with Microsoft Excel,” 26 August 2013, <https://optionexplicitvba.com/2013/08/26/dynamically-linked-checkbox-matrix-with-microsoft-excel/>, (“Jordan”) and NIGAM: “Selecting/Deselecting All the CheckBoxes Inside a GridView,” May 2008, <https://www.codeproject.com/Articles/23256/Selecting-Deselecting-all-the-CheckBoxes-Inside-a>, (“Nigam”). Final Act. 29–36.

Claim 6 has been rejected under 35 U.S.C. § 103 as allegedly being obvious over Tieftrunk and Deering, and in further view of Blumenberg et al. (US 2013/0325343 A1; published Dec. 5, 2013 (“Blumenberg”)). Final Act. 37–40.

Claim 7 has been rejected under 35 U.S.C. § 103 as allegedly being obvious over Tieftrunk, Deering, and Blumenberg, and in further view of

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Stinson et al. (US 2012/0060177 A1; published Mar. 8, 2012 (“Stinson”)).  
Final Act. 40–41.

Claim 8 has been rejected under 35 U.S.C. § 103 as allegedly being obvious over Tieftrunk, Deering, and Blumenberg, in further view of Goossen et al. (US 2014/0018979 A1; published Jan. 16, 2014 (“Goossen”)).  
Final Act. 41–43.

Claims 11, 13, 14, and 17 have been rejected under 35 U.S.C. § 103 as allegedly being obvious over Tieftrunk and Jordan. Final Act. 43–51.

Claim 12 has been rejected under 35 U.S.C. § 103 as allegedly being obvious over Tieftrunk, Jordan, and Blumenberg, and further in view of Nigam. Final Act. 52–53.

Claim 15 has been rejected under 35 U.S.C. § 103 as allegedly being obvious over Tieftrunk, Jordan, and Blumenberg, and further in view of Stinson. Final Act. 53–54.

Claim 16 has been rejected under 35 U.S.C. § 103 as allegedly being obvious over Tieftrunk, Jordan, and Blumenberg, and further in view of Deering. Final Act. 55–58.

Claim 20 has been rejected under 35 U.S.C. § 103 as allegedly being obvious over Tieftrunk and Deering, and further in view of Blumenberg and Stinson. Final Act. 58–62.

The rejection of claims 1–20 is appealed.

#### ANALYSIS

We review the appealed rejections for error based upon the issues identified by Appellant, and in light of the arguments and evidence produced thereon. *Ex parte Frye*, 94 USPQ2d 1072, 1075 (BPAI 2010) (precedential). To the extent Appellant has not advanced separate, substantive arguments

for particular claims, or other issues, such arguments are waived. 37 C.F.R. § 41.37(c)(1)(iv) (2017).

We have considered all of Appellant's arguments and any evidence presented. We highlight and address specific findings and arguments for emphasis in our analysis below.

*Rejection of Claim 10 under 35 U.S.C. § 112(b)*

The Examiner rejects claim 10 as being indefinite for failing to particularly point out and distinctly claim the subject matter which the inventor or a joint inventor regards as the invention. Advisory Act. 2. Specifically, the Examiner finds the "specification doesn't describe what the structure of 'receiver' is. Receiver is not a part of HMI or memory. Specification [0026] discloses that mission monitoring system includes a 'receiver' but no hardware for 'receiver' is disclosed." *Id.*

Appellant advances no arguments concerning the rejection under 35 U.S.C. § 112, for dependent claim 10, and, thus, waives argument as to the rejection of claim 10. *See* 37 C.F.R. § 41.37(c)(1)(iv). We, therefore, summarily sustain the rejection. *See* 37 C.F.R. § 41.37(c)(1)(iv) (2017).

*Rejection of Claims 11, 13–15, and 17 under 35 U.S.C. § 101*

The Examiner finds that claims 11, 13–15, and 17 are directed to patent-ineligible subject matter. The Examiner also "acknowledges that the amendments to claim 11 satisfies the 'significantly more' requirement of 35 U.S.C. §101, and thus are sufficient to overcome the 35 U.S.C. §101 rejection of claims 11, 13-15, and 17." Ans. 4. Nevertheless, the Examiner states "[t]hough appellant included limitations of previously filed claim 16 and as a result the amended claim 11 would overcome 35 USC 101

rejection, the amended claim 11 doesn't overcome the prior art rejection of amended claim 11. *Id.* (emphasis omitted). "This appeal is filed based on the rejection of claims on the final office action mailed on rejection mailed on 01/11/2018 but appellant is arguing about amended claim 11 filed during after final response which is not entered. Thus appellant's argument is not persuasive." *Id.*

Appellant advances no arguments concerning the rejections under 35 U.S.C. § 101, for either independent claim 11, or dependent claims 13–15, and 17, as they exist prior to requested amendment to claim 11, and, thus, waives argument as to the rejections of claims 11, 13–15, and 17. *See* 37 C.F.R. § 41.37(c)(1)(iv). We, therefore, summarily sustain the rejection. *See* 37 C.F.R. § 41.37(c)(1)(iv) (2017); *In re Baxter Int'l, Inc.*, 678 F.3d 1357, 1362 (Fed. Cir. 2012) (argument waived when not timely presented in briefing to the Board, absent exceptional circumstances); *In re Berger*, 279 F.3d 975, 984–85 (Fed. Cir. 2002) (Board did not err in sustaining a rejection under 35 U.S.C. § 112 ¶ 2 when the Examiner refused to enter an Amendment filed with Appeal Brief and applicant failed to contest the rejection as to the non-amended claims on appeal); MPEP § 1215.02 (9th ed., Rev. 08.2017, eff. Jan. 2018) ("If a ground of rejection stated by the examiner is not addressed in the appellant's brief, appellant has waived any challenge to that ground of rejection and the Board may summarily sustain it, unless the examiner subsequently withdrew the rejection in the examiner's answer."); *id.* § 1215.03 ("An appellant may, of course, choose not to present arguments or rely upon particular evidence as to certain claim rejections; however, such arguments and evidence are waived for purposes

of the appeal and the Board may summarily sustain any grounds of rejections not argued.”).

*Rejection of Claims 1, 2, 4, 5, 9, 10, and 18 under 35 U.S.C. § 103*

The Examiner finds that claims 1, 2, 4, 5, 9, 10, and 18 would have been obvious over the combination of Tieftrunk and Deering. Final Act. 9–14. Claim 1 recites “a performance monitor to provide graphical feedback of the graphical rendering rate of the display system based on the selective activation and deactivation of the plurality of graphical layers associated with the plurality of graphical elements.” The Examiner finds Tieftrunk teaches selectable activation or deactivation of graphical layers. Ans. 6. The Examiner concedes Tieftrunk does not teach “providing graphical rendering rate due to selectable activation of graphical layers.” *Id.* at 7. However, the Examiner finds Deering teaches “the display with flickering or flickering free display provides a graphical feedback of rendering rate. This graphical rendering rate depends on number of polygons and number of polygons changes based on the activation and deactivation of different variant objects or graphical elements.” *Id.*

In the disclosure relied upon by the Examiner Deering states “the rendering time is calculated” and may result in “reduc[ing] the number of polygons.” *Id.* (citing Deering 25:13–40). “Graphical rendering” is not mentioned. *Id.* Nevertheless, the Examiner finds “Deering teaches a performance monitor to provide a graphical feedback (display with flickering or not) of a graphical rendering rate of a display system that is provided based on selective activation and deactivation of a plurality of graphical elements.” *Id.* at 10 (citation omitted). In other words, the Examiner relies on Deering’s teaching that a display will flicker (or not

flicker) based on the rendering rate and whether polygons are selected in rapid succession. *Id.* (citing Deering 26:47–49 (“This hysteresis may advantageously prevent unwanted flickering that may occur if different object variants for a particular general object are selected in rapid succession.”)). The quoted section means Deering uses hysteresis to avoid flickering by changing the object that is selected based on the rendering rate and then not immediately changing back to a previous object even though the rendering rate has improved. Deering 26:37–49.

Based on the above findings, the Examiner concludes it would have been obvious for an ordinary skilled person in the art before the effective filing date of the claimed invention to have modified Tieftrunk to have included a performance monitor to provide graphical rendering rate of the display system based on the selective activation and deactivation of the plurality of graphical layers associated with the plurality of graphical elements similar to a performance monitor to provide graphical feedback (display with flickering or not) of the graphical rendering rate of a display system based on the selective activation and deactivation of a plurality of graphical elements as taught by Deering.

Ans. 11.

Appellant argues Deering provides a feature that attempts to prevent flicker, rather than display a graphical feedback of graphical rendering rate.

Reply Br. 3. Appellant argues

flickering is not an affirmative function of the method of Deering and is instead an undesired result stemming from the inability to provide sufficient rendering. Thus, flickering of a display does not actually show or determine a rendering rate. A ‘rate’ is commonly defined as a numeric value that can be calculated or measured representing a ratio between two things. Thus, to a person of ordinary skill in the art, the rendering rate would be the

numeric value of how many renders are performed over a given period of time (i.e., renders per second).

*Id.* Appellant thus contends the Examiner reversibly erred in finding Deering's system to reduce flicker teaches monitoring to provide graphical feedback of the graphical rendering rate. *Id.* Additionally, Appellant argues "there is no teaching in Deering that the user is able to ascertain the actual rendering rate of the system in a feedback manner, graphically or otherwise." Appeal Br. 11.

The Examiner finds a

[u]ser can ascertain graphical rendering rate based on display with flickering or flickering free display. It is to note that Argued limitation doesn't have "actual rendering rate". Claim 1 just recites graphical feedback of rendering rate. [F]lickering with display or flickering free display provides graphical feedback of rendering rate which is understood by a user.

Ans. 13.

The Examiner's finding is not supported by the teachings of Deering because the Examiner is reading Deering in an overly broad manner. We are persuaded by Appellant's reasonable contention that one of ordinary skill in the art would have found the flickering in Deering to represent a problem that the system was to fix, not a performance monitor for a user to observe based on selectively activating or deactivating graphical layers associated with the plurality graphical elements. Appeal Br. 11; Reply Br. 4.

Claim 18 recites "a performance monitor . . . to provide graphical feedback of the graphical rendering rate of the display system." For the same reasons as above, Tieftrunk and Deering do not disclose graphical feedback of the graphical rendering rate of the display system.

Because we agree with at least one of the dispositive arguments advanced by Appellant, we need not reach the merits of Appellant's other arguments. *See Beloit Corp. v. Valmet Oy*, 742 F.2d 1421, 1423 (Fed. Cir. 1984) (finding an administrative agency is at liberty to reach a decision based on "a single dispositive issue").

We, therefore, do not sustain the Examiner's rejection of claims 1, 2, 4, 5, 9, 10, and 18 as obvious over Tieftrunk and Deering.

*Rejection of Claims 3, 6, 7, 8, 19, and 20 under 35 U.S.C. § 103*

The Examiner finds that claims 3, 6, 7, 8, 19, and 20 would have been obvious. Final Act. 12–14. Claims 3, 6, 7, and 8 depend from claim 1, and claims 19 and 20 depend from claim 18. *See* Appeal Br. 10–11. Because we did not sustain the rejection of the independent claim, we do not sustain the Examiner's rejection of claims 3, 6, 7, 8, 19, and 20 as obvious.

*Rejection of Claims 11–15 and 17 under 35 U.S.C. § 103*

The Examiner finds that claims 11–15 and 17 would have been obvious. Final Act. 12–14. Appellant does not separately address these claims but relies on the amendment to add limitations from claim 16. *See* Appeal Br. 10–11. As noted above, the Examiner did not enter the amendment to claim 11. Thus, Appellant advances no arguments concerning the rejections under 35 U.S.C. § 101, for independent claim 11 and dependent claims 12–15 and 17 that depend therefrom, and, thus, waives argument as to the rejections of claims 1, 11, 13–15, and 17. *See* 37 C.F.R. § 41.37(c)(1)(iv). We, therefore, summarily sustain the rejection. *See* 37 C.F.R. § 41.37(c)(1)(iv) (2017).

*Rejection of Claim 16 under 35 U.S.C. § 103*

The Examiner finds that claim 16 would have been obvious over the combination of Tieftrunk, Deering, Blumenberg, and Goossen. Final Act. 9–14. Claim 1 recites “monitoring a graphical rendering rate of the display system relative to at least one threshold associated with an acceptable range of operation of the display system with respect to the graphical rendering rate of the display system in a feedback manner in response to the selective activation and deactivation of the plurality of graphical layers associated with the plurality of graphical elements.” As to claim 16, Appellant and the Examiner rely on the arguments and findings discussed regarding claim 1 above. Appeal Br. 21–22; Ans. 25. Jordan and Blumenberg are used by the Examiner to teach limitations of independent claim 11 (Final. Act. 45–47), not the additional limitation of claim 16. Final Act. 55–58. We, therefore, do not sustain the Examiner’s rejection of claim 16 as obvious over Tieftrunk, Deering, Blumenberg, and Goossen.

### CONCLUSION

We sustain the Examiner’s rejection of claim 10 under 35 U.S.C. § 112(b). We sustain the Examiner’s rejection of claims 11–15, and 17 under 35 U.S.C. § 101. We reverse the Examiner’s rejection of claims 1–10, 16, and 18–20 under 35 U.S.C. § 103(a). Because we have affirmed at least one ground of rejection with respect to claims 10, 11–15, and 17 on appeal, the Examiner’s decision rejecting claims 10, 11–15, and 17 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 [E]xaminer on that claim, except as to any ground specifically reversed.”)

### DECISION SUMMARY

<b>Claims Rejected</b>	<b>35 U.S.C. §</b>	<b>References/Basis</b>	<b>Affirmed</b>	<b>Reversed</b>
10	112(b)	Indefiniteness	10	
11, 13–15, 17	101	Eligibility	11, 13–15, 17	
1, 2, 4, 5, 9, 10, 18	103	Tieftrunk, Deering		1, 2, 4, 5, 9, 10, 18
3, 19	103	Tieftrunk, Deering, Jordan, Nigam		3, 19

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6	103	Tieftrunk, Deering, Blumenberg		6
7	103	Tieftrunk, Deering, Blumenberg, Stinson		7
8	103	Tieftrunk, Deering, Blumenberg, Goossen		8
11, 13, 14, 17	103	Tieftrunk, Jordan	11, 13, 14, 17	
12	103	Tieftrunk, Jordan, Blumerberg	12	
15	103	Tieftrunk, Jordan, Blumerberg, Stinson	15	
16	103	Tieftrunk, Jordan, Blumenberg, Deering		16
20	103	Tieftrunk, Deering, Blumenberg, Stinson		20
<b>Overall Outcome</b>			10, 11, 13–15, 17	1–9, 16, 18–20

AFFIRMED-IN-PART