UNITED STATES PATENT AND TRADEMARK OFFICE

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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 RAHUL DHAUNDIYAL and AMIT AGARWAL

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Appeal 2018-001518
Application 14/660,853
Technology Center 2100

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Before JOHN A. EVANS, JENNIFER L. McKEOWN, and
STEVEN M. AMUNDSON, *Administrative Patent Judges.*

AMUNDSON, *Administrative Patent Judge.*

DECISION ON APPEAL

Appellants[1] seek our review under 35 U.S.C. § 134(a) from a final

rejection of claims 1–20, i.e., all pending claims. We have jurisdiction under

35 U.S.C. § 6(b).

We affirm.

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[1] Appellants identify the real party in interest as Adobe Systems, Inc.
App. Br. 2.

STATEMENT OF THE CASE

The Invention

According to the Specification, the invention concerns "controlling temporal application of a visual characteristic to a document in a user interface of a computing device as part of one or more edits made to the document." Spec. ¶ 3.[2] The Specification explains that (1) "[o]ne or more inputs are detected by the computing device as associating a visual characteristic with a portion of the document in the user interface"; (2) the "level of intensity of the visual characteristic is iteratively reduced . . . without user intervention over a defined amount of time"; and (3) "application of the visual characteristic to the portion of the document is removed . . . upon expiration of the defined amount of time." *Id.* Abstract. The Specification also explains that visual characteristics include markups and annotations, such as highlighting text, underlining text, bolding text, italicizing text, and circling an object. Spec. ¶¶ 17, 24, 26–28, 30, 35, 38, 43, Figs. 1–3.

Exemplary Claim

Independent claim 1 exemplifies the claims at issue and reads as follows:

> 1. A method of controlling temporal application of a visual characteristic to a document in a user interface displayed on at least one display device of a computing device as part of one or more edits made to the document, the method comprising:

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[2] This decision uses the following abbreviations: "Spec." for the Specification, filed March 17, 2015; "Final Act." for the Final Office Action, mailed November 25, 2016; "App. Br." for the Appeal Brief, filed June 21, 2017; "Ans." for the Examiner's Answer, mailed October 3, 2017; and "Reply Br." for the Reply Brief, filed November 29, 2017.

   detecting one or more inputs by the computing device
associating a visual characteristic with a portion of the
document in the user interface displayed on the at least one
display device as part of editing the document;

   iteratively reducing a level of intensity of the visual
characteristic displayed on the at least one display device by the
computing device automatically and without user intervention
over a defined amount of time; and

   automatically removing the application of the visual
characteristic to the portion of the document displayed on the at
least one display device by the computing device upon
expiration of the defined amount of time.

App. Br. 18 (Claims App.).

The Prior Art Supporting the Rejections on Appeal

As evidence of unpatentability under 35 U.S.C. § 103, the Examiner
relies on the following prior art:

Hollander et al. ("Hollander")	US 2006/0053364 A1	Mar. 9, 2006
Kun et al. ("Kun")	US 2009/0256808 A1	Oct. 15, 2009
Liu et al. ("Liu")	US 2014/0040761 A1	Feb. 6, 2014
Smits	US 8,971,568 B1	Mar. 3, 2015

The Rejections on Appeal

Claims 1–5, 7, 8, 10, 11, 13–16, and 18–20 stand rejected under
35 U.S.C. § 103 as unpatentable over Smits and Kun. Final Act. 3–12.

Claims 6, 12, and 17 stand rejected under 35 U.S.C. § 103 as
unpatentable over Smits, Kun, and Hollander. Final Act. 12–14.

Claim 9 stands rejected under 35 U.S.C. § 103 as unpatentable over
Smits, Kun, and Liu. Final Act. 14–15.

ANALYSIS

We have reviewed the rejections in light of Appellants' arguments that the Examiner erred. For the reasons explained below, we concur with the Examiner's conclusions concerning unpatentability under § 103. We adopt the Examiner's findings and reasoning in the Final Office Action (Final Act. 3–18) and Answer (Ans. 3–34). We add the following to address and emphasize specific findings and arguments.

The § 103 Rejection of Claims 1–5, 7, 8, 10, 11, 13–16, and 18–20

INDEPENDENT CLAIM 1

Appellants argue that the Examiner erred in rejecting claim 1 because Smits and Kun do not teach or suggest the following limitations in claim 1: "iteratively reducing a level of intensity of the visual characteristic displayed on the at least one display device by the computing device automatically and without user intervention over a defined amount of time" and "automatically removing the application of the visual characteristic to the portion of the document displayed on the at least one display device by the computing device upon expiration of the defined amount of time." *See* App. Br. 5–9; Reply Br. 3–5. Specifically, Appellants assert that (1) "Smits' ink is not removed upon expiration of a 'defined amount of time'"; (2) "Smits' ink is not actively removed by a computing device"; and (3) "a graphical trace, as described in Kun, is not a 'visual characteristic.'" App. Br. 6, 8; *see* Reply Br. 3, 5. Appellants contend that "[p]artially removing or fading a graphical trace, as described in Kun, does not correspond to 'iteratively reducing a level of intensity of the visual characteristic displayed,' as recited in claim 1." App. Br. 8; *see* Reply Br. 5. Appellants urge that "[i]n the absence of a visual characteristic applied to a portion of a document, Kun

simply cannot provide a basis for 'iteratively reducing a level of intensity of the visual characteristic,' as claimed." App. Br. 8.

Appellants' arguments do not persuade us of Examiner error because they attack the references individually, while the Examiner relies on the combined disclosures in the references to reject claim 1. *See* Final Act. 3–5, 16–18; Ans. 3–5, 15–21. Where a rejection rests on the combined disclosures in the references, an appellant cannot establish nonobviousness by attacking the references individually. *See In re Merck & Co.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986). Here, the combined disclosures in Smits and Kun teach or suggest the disputed limitations in claim 1. *See* Final Act. 3–5, 16–18; Ans. 3–5, 15–21.

Specifically, Smits discloses annotating a document displayed on a screen using invisible ink to annotate an image projected on a surface that corresponds to the displayed document. Smits 2:62–5:6, 8:41–45, 14:60–15:38, Abstract, Figs. 1–5; *see* Final Act. 4–5; Ans. 3–4, 15–16, 18. Smits instructs that "the term 'invisible ink' refers to ink that is invisible to visible light—but until the invisible ink vanishes, it is still detectable by some means other than visible light, such as infrared, ultraviolet, and/or the like." Smits 3:20–23. "The invisible ink vanishes after some brief period of time," and "after vanishing the invisible ink no longer detectable by the alternate means by which it was previously detectable." *Id.* at 3:28–36.

Smits' annotation process includes (1) marking an image projected on a surface with the invisible ink, e.g., using a fine- or broad-tipped stylus/pen, (2) detecting the invisible ink before it vanishes, (3) storing location information for the detected invisible ink, and (4) based on the stored location information, visibly modifying a document displayed on a screen

that corresponds to the image projected on the surface. Smits 2:63–3:6, 4:26–32, 4:41–45, 4:55–5:6, 14:60–15:13, Abstract, Fig. 3; *see* Final Act. 4, 16; Ans. 3, 15–17. The visible annotations in the displayed document align with the vanished ink positions on the surface. Smits 4:41–45, 8:41–45, 14:3–5; *see* Ans. 20–21. The visible annotations may include highlighting text, underlining text, and circling an object. Smits 3:11–14, 14:60–67; *see* Final Act. 4; Ans. 3, 15–18. Also, the visible annotations may have "any color, shape, translucency, [or] duration." *Id.* at 15:4–12. Thus, Smits' visible annotations in the displayed document satisfy the claim language about applying "a visual characteristic to a document in a user interface."

Kun discloses a method for gradually fading and then removing stroke-based character inputs for "a wide variety of devices such as mobile phones, laptops with graphical user interfaces and Personal Digital Assistants (PDAs)." Kun ¶¶ 1–2, 5, 11–13, 15, 17–19, 35, 63–81, Abstract, Figs. 4a–4d; *see* Final Act. 5; Ans. 4. The fading and removal may occur in several steps. Kun ¶¶ 11–13, 18–19, 63, 79, Figs. 4a–4d; *see* Final Act. 5; Ans. 4, 19, 21. For instance, "[i]n a first step the trace is only removed partially to give the user a premonition that it is about to be removed and providing the user with an opportunity to use the trace for further (supplementary) input," and "[i]n the second step the trace is removed completely." Kun ¶ 63; *see id.* ¶¶ 11–13, 18–19, 79; Final Act. 5; Ans. 4–5, 21. Fading may occur by decreasing the intensity and/or changing the color of stroke-based character inputs. Kun ¶¶ 19, 79, Figs. 4a–4d; *see* Final Act. 5; Ans. 4, 19. Further, fading may occur based on a user-specified temporal criterion, e.g., character input speed. *Id.* ¶¶ 15, 35, 63, 65, 73–79.

Thus, Smits teaches or suggests "temporal application of a visual characteristic to a document in a user interface," and Kun teaches or suggests "iteratively reducing a level of intensity" for displayed characters and "automatically removing" displayed characters. *See* Smits 2:62–5:6, 8:41–45, 14:60–15:38, Abstract, Figs. 1–5; Kun ¶¶ 1–2, 5, 11–13, 15, 17–19, 35, 63–81, Abstract, Figs. 4a–4d. And the combined disclosures in Smits and Kun teach or suggest the disputed limitations in claim 1. *See* Final Act. 3–5, 16–18; Ans. 3–5, 15–21.

Appellants contend that Smits' invisible ink "is not a displayed visual characteristic," such as highlighting text. App. Br. 7 (citing Spec. ¶ 24); Reply Br. 4. But that contention does not distinguish claim 1 from Smits because the claimed "visual characteristic" corresponds to Smits' visible annotations in the displayed document. Smits explains that visible annotations may include highlighting text, underlining text, and circling an object. Smits 3:11–14, 14:60–67; *see* Final Act. 4; Ans. 3, 15–18. Similarly, the Specification explains that visual characteristics may include highlighting text, underlining text, and circling an object. Spec. ¶¶ 17, 24, 27–28, Figs. 1–3.

<center>INDEPENDENT CLAIM 11</center>

Appellants argue that the Examiner erred in rejecting independent claim 11 because "neither the cited portions of Smits or Kun, nor elsewhere in these references, discloses, teaches, or in any way suggests" the following limitation in claim 11: "respond to detection of one or more inputs that markup a portion of content in a user interface and iteratively reduce a level of intensity of the markup displayed on the at least one display device over a defined amount of time." App. Br. 11. Similar to the arguments for claim 1,

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Appellants assert that (1) "Smits' ink is not reduced over a 'defined amount of time'" and (2) "a graphical trace, as described in Kun, is not a 'markup of a portion of content in a user interface.'" *Id.* at 12.

Appellants' arguments do not persuade us of Examiner error because they attack the references individually, while the Examiner relies on the combined disclosures in the references to reject claim 11. *See* Final Act. 3–5, 10, 16–18; Ans. 3–5, 9, 25–28. As indicated by the discussion of Smits and Kun for claim 1, the combined disclosures in Smits and Kun teach or suggest the disputed limitation in claim 11. *See* Final Act. 3–5, 10, 16–18; Ans. 3–5, 9, 25–28.

For example, Smits discloses "detection of one or more inputs that markup a portion of content in a user interface." *See* Smits 2:62–5:6, 8:41–45, 14:60–15:38, Abstract, Figs. 1–5. In particular, Smits describes detecting invisible-ink markings on an image projected on a surface that corresponds to a document displayed on a screen. Smits 2:63–3:6, 4:41–45, 4:55–5:6, 14:60–15:13, Abstract; *see* Final Act. 4, 16; Ans. 3, 15–18, 25–28. Further, Kun discloses reducing a level of intensity in several steps over a defined amount of time, i.e., "iteratively" reducing a level of intensity. Kun ¶¶ 11–13, 18–19, 63, 65, 73–79, Abstract, Figs. 4a–4d; *see* Final Act. 5; Ans. 4, 19, 21, 28. Kun also discloses setting a timeout value for fading based on character input speed, i.e., "a short timeout value for a user who inputs characters quickly and a longer timeout value for a slower user." Kun ¶ 75; *see id.* ¶¶ 15, 35.

INDEPENDENT CLAIM 16

Appellants argue that the Examiner erred in rejecting independent claim 16 because "neither the cited portions of Smits or Kun, nor elsewhere

in these references, discloses, teaches, or in any way suggests" the following limitations in claim 16: "responsive to the detecting, causing application of color to the defined portion of the content in the user interface displayed on the at least one display device" and "iteratively reducing a level of intensity of the application of the color displayed on the at least one display device by the computing device over a defined amount of time." App. Br. 14. Similar to the arguments for claims 1 and 11, Appellants assert that (1) "Smits' ink is not reduced over a 'defined amount of time'" and (2) "a graphical trace, as described in Kun, is not an 'application of color to [a] defined portion of the content in the user interface.'" *Id.* at 14–15.

Appellants' arguments do not persuade us of Examiner error because they attack the references individually, while the Examiner relies on the combined disclosures in the references to reject claim 16. *See* Final Act. 3–5, 11, 16–18; Ans. 3–5, 10, 30–33. As indicated by the discussion of Smits and Kun for claims 1 and 11, the combined disclosures in Smits and Kun teach or suggest the disputed limitations in claim 16. *See* Final Act. 3–5, 11, 16–18; Ans. 3–5, 10, 30–33.

For example, Smits discloses detecting invisible-ink markings on an image projected on a surface that corresponds to a document displayed on a screen, including detecting markings corresponding to highlighting. Smits 2:63–3:6, 3:13–14, 4:41–45, 4:55–5:6, 14:60–15:13, Abstract; *see* Final Act. 4, 16; Ans. 3, 15–18, 30–32. Smits describes the highlighting as having "any color." Smits 15:4–12. Further, Kun discloses reducing a level of intensity in several steps over a defined amount of time, e.g., by decreasing the intensity and changing the color of stroke-based character inputs. Kun

¶¶ 11–13, 18–19, 63, 65, 73–79, Abstract, Figs. 4a–4d; *see* Final Act. 5;
Ans. 4, 19, 21, 32–33.

<div align="center">MOTIVATION TO COMBINE SMITS AND KUN</div>

Appellants argue that the Examiner "failed to provide articulated
reasoning with some rational underpinning to support the legal conclusion of
obviousness." App. Br. 9. Specifically, Appellants assert that "the stated
motivation fails to explain why a person of skill in the art would combine
the writing of Kun with the physical invisible ink of Smits." *Id.* We
disagree.

The Examiner explains that an ordinarily skilled artisan would have
been motivated to combine Smits and Kun to "gradually reduce the intensity
level of an annotation in order to provide the user with a warning associated
with the annotation." Final Act. 5 (citing Kun ¶¶ 18, 79); Ans. 4–5, 20–21
(citing Kun ¶¶ 18, 79). Consistent with the Examiner's explanation, Kun
instructs that "[b]y gradually removing or fading the portion to be removed
before actually removing it completely a user receives a pre-warning that the
portion is to be removed and is thus given an opportunity to supplement or
correct the stroke(s) corresponding to the graphical trace(s) about to be
removed." Kun ¶ 18; *see id.* ¶¶ 13, 63, 79, Figs. 4a–4d.

Hence, the Examiner provides articulated reasoning with some
rational underpinning for why an ordinarily skilled artisan would have
combined Smits and Kun, including identifying an advantage achieved with
the combination. Final Act. 5; Ans. 4–5, 21. "[T]he law does not require
that the references be combined for the reasons contemplated by the
inventor." *In re Beattie*, 974 F.2d 1309, 1312 (Fed. Cir. 1992); *see Outdry
Techs. Corp. v. Geox S.p.A.*, 859 F.3d 1364, 1371 (Fed. Cir. 2017). "[A]ny

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need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combining" references. *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 420 (2007).

SUMMARY FOR INDEPENDENT CLAIMS 1, 11, AND 16

For the reasons discussed above, Appellants' arguments have not persuaded us that the Examiner erred in rejecting the independent claims under § 103. Thus, we sustain the § 103 rejection of the independent claims.

DEPENDENT CLAIMS 2–5, 7, 8, 10, 13–15, AND 18–20

Appellants do not argue patentability separately for dependent claims 2–5, 7, 8, 10, 13–15, and 18–20. App. Br. 9, 13, 15. Thus, we sustain the § 103 rejection of these dependent claims for the same reasons as the independent claims. *See* 37 C.F.R. § 41.37(c)(1)(iv).

The § 103 Rejection of Claims 6, 12, and 17

Claim 6 depends from claim 1; claim 12 depends from claim 11; and claim 17 depends from claim 16. App. Br. 19–21 (Claims App.). For these dependent claims, Appellants assert that (1) "Hollander is not cited as addressing the above-noted deficiencies of Smits and Kun" for the independent claims and (2) "the combination of Smits, Kun, and Hollander fails to teach or suggest" the limitations in these dependent claims "for at least the same reasons previously discussed" for the independent claims. App. Br. 9–10, 13, 16. Appellants' assertions do not constitute separate patentability arguments. *See In re Lovin*, 652 F.3d 1349, 1357 (Fed. Cir. 2011) (explaining that the applicable rules "require 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"). Because Appellants do not argue the claims separately, we

sustain the § 103 rejection of dependent claims 6, 12, and 17 for the same reasons as the independent claims. *See* 37 C.F.R. § 41.37(c)(1)(iv).

The § 103 Rejection of Claim 9

Claim 9 depends from claim 1 and requires that "the defined amount of time is specified by a user through interaction with one or more settings of the user interface." App. Br. 19 (Claims App.). Appellants assert that the Examiner erred in rejecting claim 9 because "[e]xpiration of a point of interest, as described in Liu, does not correspond to the 'defined amount of time' recited in claim 9." *Id.* at 10. Appellants concede that "Liu describes that a 'user can set a time period in which the point of interest expires' and that '[a]n expired point of interest can be removed from the data store of points of data' or 'archived in the data store.'" *Id.* (quoting Liu ¶ 20). But Appellants contend that "[s]etting an amount of time for removal of a point of interest from a data store simply does not correspond to specification of a defined amount of time over which 'a level of intensity of [a] visual characteristic displayed' is reduced." *Id.* at 10–11. Appellants explain that "[t]his is in part because a point of interest is not a displayed visual characteristic." *Id.* at 11.

Appellants' arguments do not persuade us of Examiner error because they attack the references individually, while the Examiner relies on the combined disclosures in the references to reject claim 9. *See* Final Act. 3–5, 14–18; Ans. 3–5, 13–21. As explained above for claim 1, Smits' visible annotations in the displayed document satisfy the claim language about applying "a visual characteristic to a document in a user interface." *See, e.g.*, Smits 3:7–14, 4:41–45, 8:41–45, 14:3–5, 14:60–15:18, Abstract, Figs. 1–5; Final Act. 4, 16–17; Ans. 3, 15–18. Liu discloses a user-specified

expiration time for a displayed feature, i.e., a point of interest. Liu ¶¶ 20, 37–38, Fig. 3; *see* Final Act. 14–15; Ans. 13–14, 24. Further, Kun discloses a user-specified temporal criterion for fading. Kun ¶¶ 15, 35, 63, 65, 73–79. Accordingly, the combined disclosures in the references teach or suggest claim 9's subject matter. *See* Final Act. 3–5, 14–18; Ans. 3–5, 13–21.

Because Appellants' arguments do not persuade us of Examiner error, we sustain the § 103 rejection of claim 9.

DECISION

We affirm the Examiner's decision to reject claims 1–20.

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). *See* 37 C.F.R. § 41.50(f).

<u>AFFIRMED</u>