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Mastercard International Incorporated c/o Buckley, Maschoff & Talwalkar LLC 50 Locust Avenue New Canaan, CT 06840			KUCAB, JAMIE R	
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szpara@bmtpatent.com

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* MANONEET KOHLI

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Appeal 2020-003430  
Application 15/131,718  
Technology Center 3600

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Before ST. JOHN COURTENAY III, LARRY J. HUME, AND  
PHILLIP A. BENNETT, *Administrative Patent Judges*.

HUME, *Administrative Patent Judge*.

DECISION ON APPEAL

Pursuant to 35 U.S.C. § 134(a), Appellant<sup>1</sup> appeals from the Examiner's decision rejecting claims 1–5 and 15–19, which are all rejections pending in the application. Appellant has canceled claims 6–14 and 20. *See* Final Act. 2. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

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<sup>1</sup> We use the term “Appellant” to refer to “applicant” as defined in 37 C.F.R. § 1.42. The Real Party in Interest is Mastercard International Inc. Appeal Br. 2.

STATEMENT OF THE CASE<sup>2</sup>

The claims are directed to a system and method of device profiling for transaction scoring and loyalty promotion. *See* Spec. (Title). In particular, Appellant’s embodiments disclose “an authentication service for online transactions may perform device authentication processes based on characteristics of a user device in regard to application programs (apps) that are operating in the user device.” Spec. 4, ll. 3–5.

*Exemplary Claim*

Claim 1, reproduced below, is representative of the subject matter on Appeal (*emphases* added to contested prior-art limitations):

1. A method comprising:  
receiving current device profile data with respect to a mobile device;  
comparing the received current device profile data with stored reference device profile data; and  
making a device authentication determination with respect to the mobile device based at least in part on a result of the comparing step;  
said received current device profile data and said stored reference device profile data indicative of at least one application program characteristic of the mobile device;  
*wherein said at least one application program characteristic of the mobile device includes respective amounts of power usage attributable to respective application programs.*

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<sup>2</sup> Our decision relies upon Appellant’s Appeal Brief (“Appeal Br.,” filed Nov. 8, 2019); Reply Brief (“Reply Br.,” filed April 3, 2020); Examiner’s Answer (“Ans.,” mailed March 6, 2020); Final Office Action (“Final Act.,” mailed July 5, 2019); and the original Specification (“Spec.,” filed April 18, 2016).

## REFERENCES

The prior art relied upon by the Examiner as evidence is:

Name	Reference	Date
Spencer, III et al. (“Spencer”)	US 2015/0278805 A1	Oct. 1, 2015
Desai et al. (“Desai”)	US 2016/0155128 A1	June 2, 2016
Sankaranarasimhan et al. (“Sanka”) <sup>3</sup>	US 2016/0188324 A1	June 30, 2016

## REJECTIONS

R1. Claims 1, 4, 5, 15, 18, and 19 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of Spencer and Sanka. Final Act. 4.

R2. Claims 2, 3, 16, and 17 stand rejected under 35 U.S.C. § 103 as being unpatentable over Spencer, Sanka, and Desai. Final Act. 5.

## CLAIM GROUPING

Based on Appellant’s arguments (Appeal Br. 4) and our discretion under 37 C.F.R. § 41.37(c)(1)(iv), we decide the appeal of obviousness Rejection R1 of claims 1, 4, 5, 15, 18, and 19 on the basis of representative claim 1.

We address Rejection R2 of remaining claims 2, 3, 16, and 17, not separately argued, *infra*.<sup>4</sup>

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<sup>3</sup> We adopt the Examiner’s shorthand designation of the Sankaranarasimhan reference as “Sanka.” *See generally* Final Act., Ans.

<sup>4</sup> “Notwithstanding any other provision of this paragraph, the failure of appellant to separately argue claims which appellant has grouped together shall constitute a waiver of any argument that the Board must consider the

## ISSUES AND ANALYSIS

In reaching this decision, we consider all evidence presented and all arguments actually made by Appellant. 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).

We disagree with Appellant's arguments with respect to claims 1–5 and 15–19 and, unless otherwise noted, we incorporate by reference herein and 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 Appellant's arguments. We highlight and address specific findings and arguments regarding claim 1 for emphasis as follows.

1. § 103 Rejection R1 of Claims 1, 4, 5, 15, 18, and 19

Issue 1

Appellant argues (Appeal Br. 4–6) the Examiner's rejection of claim 1 under 35 U.S.C. § 103 as being obvious over the combination of Spencer and Sanka is in error. Appellant's contentions present us with the following issues:

(1) Did the Examiner err in finding the cited prior art combination teaches or suggests “*wherein said at least one application program characteristic of the mobile device includes respective amounts of power*

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patentability of any grouped claim separately.” 37 C.F.R. § 41.37(c)(1)(iv). In addition, when Appellant does not separately argue the patentability of dependent claims, the claims stand or fall with the claims from which they depend. *In re King*, 801 F.2d 1324, 1325 (Fed. Cir. 1986).

*usage attributable to respective application programs,”* as recited in claim 1?

(2) Did the Examiner err in combining the prior art in the manner suggested because Sanka is allegedly non-analogous art?

*Principles of Law*

During prosecution, claims must be given their broadest reasonable interpretation when reading claim language in light of the specification as it would be interpreted by one of ordinary skill in the art. *In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004). Under this standard, we interpret claim terms using “the broadest reasonable meaning of the words in their ordinary usage as they would be understood by one of ordinary skill in the art, taking into account whatever enlightenment by way of definitions or otherwise that may be afforded by the written description contained in the applicant’s specification.” *In re Morris*, 127 F.3d 1048, 1054 (Fed. Cir. 1997).

“[O]ne cannot show non-obviousness by attacking references individually where . . . the rejections are based on combinations of references.” *In re Keller*, 642 F.2d 413, 426 (CCPA 1981). “The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference . . . . Rather, the test is what the combined teachings of those references would have suggested to those of ordinary skill in the art.” *Id.* at 425.

In *KSR*, the Court stated “[t]he combination of familiar elements according to known methods is likely to be obvious when it does no more

than yield predictable results.” *KSR Int’l Co. v. Teleflex, Inc.*, 550 U.S. 398, 416 (2007).

When a work is available in one field of endeavor, design incentives and other market forces can prompt variations of it, either in the same field or a different one. If a person of ordinary skill can implement a predictable variation, § 103 likely bars its patentability. For the same reason, if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill. . . . [A] court must ask whether the improvement is more than the predictable use of prior art elements according to their established functions.

*Id.* at 417.

Further, the relevant inquiry is whether the Examiner has set forth “some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006) (cited with approval in *KSR*, 550 U.S. at 418).

“Two separate tests define the scope of analogous prior art: (1) whether the art is from the same field of endeavor, regardless of the problem addressed and, (2) if the reference is not within the field of the inventor’s endeavor, whether the reference still is reasonably pertinent to the particular problem with which the inventor is involved.” *In re Klein*, 647 F.3d 1343, 1348 (Fed. Cir. 2011).

Analysis

*Issue (1): All Limitations are Taught or Suggested*

The Examiner finds the combination of Spencer and Sanka teaches or suggests the contested limitations in paragraph 8 of Spencer and paragraph 99 of Sanka. Final Act. 4–5.

Appellant contends, “While Spencer teaches a number of different data elements making up a hardware profile that is used for device authentication, Spencer fails to teach or suggest using application power usage as a hardware profile data element for purposes of device authentication.” Appeal Br. 5.

The Examiner responds to this argument in the Answer by explaining that Spencer’s teaching of “frequency of use of applications” from which power usage can be estimated combined with Sanka’s teaching of the application state of information also including battery usage of the application teaches the disputed limitation. Ans. 3.

We agree with the Examiner’s finding that the combined teachings of Spencer and Sanka at least suggest the contested limitations of claim 1 because Spencer’s teaching of a hardware profile including frequency of use of applications, which is indicative of battery usage and drain, combined with Sanka’s application state information, that includes information on the battery usage of the application, teach or at least suggest the disputed limitation. See Spencer ¶ 8, Sanka ¶ 99.

*Issue (2): Sankaranarasimhan is Analogous Art*

The Examiner relies upon Sanka’s application state information including battery usage of the application for teaching or suggesting “at least

one application program characteristic of the mobile device includes . . . power usage attributable to . . . application programs.” Final Act. 5. Therefore, “it would have been obvious to one of ordinary skill in the art . . . to modify Spencer to include the application power usage of Sankaranarasimhan in order to achieve the predictable result of a more resilient digital fingerprinting system capable of dealing with a wider variety of potential attacks.” *Id.*

Appellant’s argument focuses on whether the prior art references are analogous. *See* Ans. 3 for the Examiner’s understanding of Appellant’s argument. A rejection under 35 U.S.C. § 103 cannot be based on non-analogous art. *Innovention Toys, LLC, v. MGA Entertainment, Inc.*, 637 F.3d 1314, 1321 (Fed. Cir. 2011); *In re Bigio*, 381 F.3d 1320, 1325 (Fed. Cir. 2004); *In re Clay*, 966 F.2d 656, 658 (Fed. Cir. 1992).

Art is analogous when it is: (1) from the same field of endeavor as the claimed invention; or (2) reasonably pertinent to the particular problem faced by the inventor, if the art is not from the same field of endeavor. *Bigio*, 381 F.3d at 1325–26. However, “[t]he Supreme Court’s decision in *KSR* . . . directs us to construe the scope of analogous art broadly.” *Wyers v. Master Lock Co.*, 616 F.3d 1231, 1238 (Fed. Cir. 2010). “The field of endeavor of a patent is not limited to the specific point of novelty, the narrowest possible conception of the field, or the particular focus within a given field.” *Unwired Planet, LLC v. Google Inc.*, 841 F.3d 995, 1001 (Fed. Cir. 2016).

Specifically, Appellant argues, “The general subject of Sanka’s disclosure relates to accessing configurations (also called “states”) of mobile

applications. Sanka has nothing to do with device authentication.” Appeal Br. 5.

We disagree with Appellant because, as found by the Examiner:

As noted by Appellant, Sanka is directed to determining “configurations (also called ‘states’) of mobile applications” (Brief, pg. 5). Because the instant invention is directed to the problem of determining device identity, one of the mechanisms for determining device identity is to determine application state, and the Sanka reference is directed to determining application state, the Sanka reference is reasonably pertinent to the problem addressed by the instant invention.

Ans. 4.

Even if Appellant were correct that Sanka is not from the same field of endeavor as Appellant’s claimed invention or Spencer, we agree with the Examiner because Sanka at least satisfies the second prong of the *Bigio* test, i.e., Sanka is reasonably pertinent to the particular problem faced by the inventor, because Sanka provides application state information including data on battery usage of the application. Ans. 3–4, Sanka ¶ 99.

Appellant also alleges a lack of motivation to combine the references. Appeal Br. 5.

We disagree with Appellant’s contention and further find the Examiner’s stated motivation to combine is proper, i.e., “[i]t would have been obvious to one having ordinary skill in the art at the time of the invention to modify Spencer to include the application power usage of Sankaranarasimhan in order to achieve the predictable result of a more resilient digital fingerprinting system capable of dealing with a wider variety of potential attacks.” Final Act. 5. The Examiner further finds:

[A]pplication state is a useful tool in identifying user devices, and the more of these tools employed, the more likely that the device will be correctly identified. Or, as put in the final rejection, “[i]t would have been obvious . . . to include the application power usage of [Sanka] in order to achieve the predictable result of a more resilient digital fingerprinting system capable of dealing with a wider variety of potential attacks.” Additionally, the primary reference uses “frequency of use of applications” as one of its measured application states, and using Sanka's application power usage could be seen as substituting one known equivalent process for another, because higher use frequency typically results in higher power usage.

Ans. 5.

We find these motivational statements meet the requirements of *Kahn* and *KSR*. *See Kahn*, 441 F.3d 977 at 988; *KSR*, 550 U.S. at 418.

Appellant further argues the application power usage characteristic data is functionally operative — and not nonfunctional descriptive material as the Examiner concludes. Ans. 6, Final Act. 5. Although we need not reach this non-dispositive issue, we are not persuaded by Appellant’s argument because the type of this data does not affect the outcome of the method or apparatus as claimed.

Based upon the findings above, on this record, we are not persuaded of error in the Examiner’s reliance on the cited prior art combination to teach or suggest the disputed limitations of claim 1, nor do we find error in the Examiner’s resulting legal conclusion of obviousness. Therefore, we sustain the Examiner’s obviousness rejection of independent claim 1, and grouped claims 4, 5, 15, 18, and 19 which fall therewith. *See Claim Grouping, supra*.

2. § 103 Rejection R2 of Claims 2, 3, 16, and 17

In view of the lack of *any* substantive or separate arguments directed to obviousness Rejection R2 of claims 2, 3, 16, and 17 under § 103, we sustain the Examiner’s rejection of these claims. Arguments not made are waived. *See* 37 C.F.R. § 41.37(c)(1)(iv).

CONCLUSION

The Examiner did not err with respect to obviousness Rejections R1 and R2 of claims 1–5 and 15–19 under 35 U.S.C. § 103 over the cited prior art combinations of record, and we sustain the rejections.

DECISION SUMMARY

<b>Claims Rejected</b>	<b>35 U.S.C §</b>	<b>Basis / References</b>	<b>Affirmed</b>	<b>Reversed</b>
1, 4, 5, 15, 18, 19	103	Obviousness Spencer, Sanka	1, 4, 5, 15, 18, 19	
2, 3, 16, 17	103	Obviousness Spencer, Sanka, Desai	2, 3, 16, 17	
<b>Overall Outcome</b>			1–5, 15–19	

FINALITY AND 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)(1)(iv). *See* 37 C.F.R. § 41.50(f).

AFFIRMED