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STEVENS & SHOWALTER LLP
7019 CORPORATE WAY
DAYTON, OH 45459-4238

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte SERGIO SCHULTE DE OLIVEIRA, ROBERT J. KELLEY, BENJAMIN J. PURRENHAGE, and PHILIP W. SWIFT[1]

Appeal 2019-007016
Application 14/147,180
Technology Center 3600

Before JEFFREY N. FREDMAN, DEBORAH KATZ, and JOHN G. NEW, *Administrative Patent Judges*.

NEW, *Administrative Patent Judge*.

DECISION ON APPEAL

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[1] We use the word "Appellant" to refer to "applicant" as defined in 37 C.F.R. § 1.42. Appellant identifies Crown Equipment Corporation as the real party-in-interest. App. Br. 1.

SUMMARY

Appellant files this appeal under 35 U.S.C. § 134(a) from the Examiner's Non-Final Rejection of claims 1–8 and 10–22. Specifically, claims 1, 2, 4–6, and 16–22 stand rejected as unpatentable under 35 U.S.C. § 103(a) as being obvious over the combination of Wellman (US 2008/0154712 A1, June 26, 2008) ("Wellman"), Kote et al. (US 2012/022642 A1, September 6, 2012) ("Kote"), and Storzum et al. (US 2009/0063238 A1, March 5, 2009) ("Storzum").

Claims 3, 10, and 12 stand rejected as unpatentable under 35 U.S.C. § 103(a) as being obvious over the combination of Wellman, Kote, Storzum, and Hulen et al. (US 2006/0161471 A1, July 20, 2006) ("Hulen").

Claims 7, 8, 11, 13, and 14 stand rejected as unpatentable under 35 U.S.C. § 103(a) as being obvious over the combination of Wellman, Kote, Storzum, and Adendorff et al. (US 2005/0071737 A1, March 31, 2005) ("Adendorff").

Claim 15 stands rejected as unpatentable under 35 U.S.C. § 103(a) as being obvious over the combination of Wellman, Kote, Storzum, and Williams et al. (US 2008/0125933 A1, May 29, 2008) ("Williams").

We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

NATURE OF THE CLAIMED INVENTION

Appellant's claimed invention is directed to a method and system of measuring industrial vehicle activity based upon operator performance by evaluating a current state of performance measures from across multiple data domains. Spec. Abstr. ¶¶ 5, 6.

REPRESENTATIVE CLAIM

Independent claim 1 is representative of the claims on appeal and recites:

> 1. A method of measuring industrial vehicle activity based upon operator performance, the method comprising:
>
> customizing an operator-specific performance profile instance for a vehicle operator of an industrial vehicle, the operator-specific performance profile instance having a performance measure characterized by a rule that defines how to measure industrial vehicle activity associated with a predetermined vehicle task;
>
> defining a window that limits a scope of data that can contribute to evaluating a current state of the operator-specific performance profile instance; and
>
> updating continuously, the current state of the operator-specific performance profile instance by:
>
> automatically collecting industrial vehicle usage information during the defined window as the industrial vehicle is used in operation;
>
> linking an identification of the vehicle operator of the industrial vehicle to the industrial vehicle usage information;
>
> querying at least one data source to retrieve task records associated with the predetermined vehicle task of the performance measure within the defined window;
>
> utilizing the retrieved task records to verify and select the industrial vehicle usage data that is linked to the identification of the vehicle operator and that is needed to evaluate the performance measure according to the associated rule; and

> processing the performance measure of the operator-specific performance profile instance utilizing the selected industrial vehicle usage data according to the associated rule;
>
> generating at least one score based upon the evaluated operator-specific performance profile instance; and
>
> wirelessly transmitting, to the industrial vehicle, data representing at least a portion of the current state of the operator-specific performance profile instance for display on a vehicle display device as a graphical representation of a progress meter such that the current state of the operator-specific performance profile instance is dynamically updated in real-time.

App. Br. 30–31.

ISSUES AND ANALYSIS

Appellant argues all of the claims together. *See* App. Br. 29. We agree with, and expressly adopt, the Examiner's findings, reasoning, and conclusion that the claims are *prima facie* obvious over the combined cited prior art. We address below the arguments raised by Appellant.

Issue 1

Appellant argues that the Examiner erred in finding the combined cited prior art references teach or suggest the limitation of claim 1 reciting an: "operator-specific performance profile instance having a performance measure characterized by a rule that defines how to measure industrial vehicle activity associated with a predetermined vehicle task." App. Br. 19.

Analysis

The Examiner finds that Wellman teaches a method of measuring the performance of an industrial vehicle operator including a customized work environment that automatically configures performance characteristics and other industrial vehicle related parameters based upon a received operator logon. Non-Final Act. 5. The Examiner finds that Wellman teaches that "[t]he system may also provide statistics and/or other feedback on operator efficiency and/or improvements so that new operators can actively monitor whether they understand their assigned tasks, the usage of the [industrial vehicle] and to confirm that they are developing their skill at an appropriate target rate." *Id.* at 12. The Examiner finds that Wellman further teaches that the system may provide an operator rating based upon actual-monitored measures of operator capabilities, by monitoring and logging the industrial vehicle's operation and wirelessly transmitting the information. *See id.*

The Examiner finds that Wellman teaches measuring impacts as a performance measure to evaluate operator skill. *See* Non-Final Action at 5. The Examiner finds that Wellman teaches measuring impacts with an intelligent shock-sensing system that distinguishes between impacts or shocks depending on given applications or intended users. *See id.*

The Examiner finds that Kote teaches a system for creating a digital signature for a vehicle operator. Non-Final Act. 7. The Examiner finds that Kote teaches developing the digital signature by observing a vehicle operator's driving behavior and habits over a time window sufficient for the system to collect enough operational data to match with the signature kept on file for that operator. *Id.* The Examiner finds that Kote teaches

measuring different types of data, filtering the data using mathematical operations, and processing the data. *Id.* at 13.

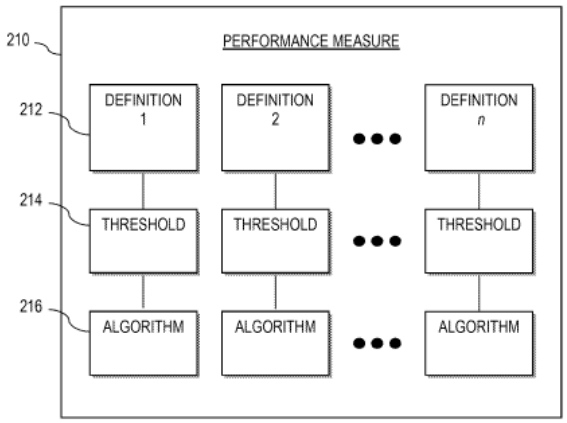
The Examiner finds that Storzum teaches a system for measuring performance metrics for evaluating workers including an execution station with a planned workload receiver and a completion indicator. *See* Non-Final Act. 15. The Examiner finds that Storzum teaches measuring the execution time and comparing a planned execution time to an actual execution time to indicate the performance of a worker. *See id.*

The Examiner concludes that, at the time of Appellant's invention, it would have been *prima facie* obvious to one of ordinary skill in the art, "to modify the system and method of assessing the performance of operators of vehicles/forklifts in Wellman to further determine numeric representations of a person's performance … as disclosed in Kote," and "to utilize a completion indicator and track planned times as well as actual completion times as disclosed in Storzum." Non-Final Act. 16–18. The Examiner arrives at this conclusion because the references are directed to solving the same problem of assessing worker performance, and the claimed invention is merely a combination of old elements. *See id.*

Appellant contends the prior art does not teach "a performance measure characterized by a rule that defines how to measure industrial vehicle activity associated with a predetermined vehicle task." App. Br. 19–20. Appellant asserts that the Examiner "stitch[es] together non-related sections of Wellman that go beyond what is permitted, even by the Broadest Reasonable Interpretation Standard." *Id.* at 20. Appellant asserts the Examiner "attempts to aggregate several examples in Wellman of 'rules,'" including target rate, performance tuning, and key performance indicators,

but does not identify performance measures characterized by task-associated rules. *Id.* at 22 (citing Wellman ¶¶ 147, 157, 205).

We are not persuaded by Appellant's argument. We begin with the interpretation of the claimed feature of an "operator-specific performance profile instance having a performance measure characterized by a rule that defines how to measure industrial vehicle activity associated with a predetermined vehicle task." App. Br. 30. Appellant contends "[t]he operator-specific performance profile instance includes (at least one) performance measure (FIG. 3 [ ]) characterized by a rule/definition (FIG. 4 [ ]) that defines how to measure industrial vehicle activity associated with a predetermined vehicle task." *Id.* at 13. Figure 4 is reproduced below:



> Figure 4 "is a block diagram illustrating an organization of a performance measure into one or more criteria, thresholds and algorithms." Spec. ¶ 10.

The Specification states "performance measure 210 comprises a definition 212, an *optional* threshold 214 … and an *optional* algorithm 216 to evaluate or assist in the evaluation of the corresponding definition 212." Spec. ¶ 43 (emphasis added). The Specification further states "[t]he definition 212 includes at least one criterion (or set of related criteria) that are used to

evaluate the corresponding metric … each criterion may be expressed as a rule that specifies conditions, requirements, or both, to evaluate the metric or an aspect thereof." *Id.* at ¶ 44. The Specification does not provide any express definition that limits the claimed "rule" apart from the plain meaning of the claims, and we do not agree that the Examiner erred in broadly interpreting this limitation.

Appellant repeatedly asserts that the prior art does not teach the "rule" limitation, but does not explain or define the scope of the limitation or how it can be distinguished from the teachings of the prior art. Appellant asserts that the Examiner impermissibly combines non-related sections of Wellman. However, "picking and choosing may be entirely proper in the making of a 103, obviousness rejection, where the applicant must be afforded the opportunity to rebut with objective evidence any inference of obviousness which may arise from the similarity of the subject matter which he claims to the prior art." *In re Arkley*, 455 F.2d 586, 587–88 (C.C.P.A. 1972).

We agree with the Examiner that Wellman teaches customizing an operator-specific profile for a mobile asset (vehicle) work environment. Wellman ¶¶ 145, 146. Wellman teaches the operator-specific profile includes performance measures, i.e., statistics or feedback on operator efficiency so that operator can actively monitor tasks and skills. *Id.* at ¶ 147. Wellman teaches using the monitoring and logging information to create an operator rating based on actual performance measures. *Id.* at ¶ 158. Wellman also teaches performance measures characterized by rules: "[f]or example, if an operator trips the impact sensors 60 a predetermined number of times, or when traveling at certain speeds, the corresponding performance rating may be adjusted." *Id.* Accordingly, we find that Wellman teaches an

example of a rule in terms of a metric (impacts) with a given threshold (number of times or speed) and algorithm (rating adjustment) associated with a predetermined vehicle task. *See id.* at ¶¶ 127, 158.

Issue 2

Appellant argues that the Examiner erred in finding the combined cited prior art references teach or suggest the limitation of claim 1 reciting: "updating continuously, the current state of the operator-specific performance." App. Br. 23.

Analysis

Appellant contends that Wellman's paragraphs 0157–0158 teach a static performance rating and do not teach "updating continuously." App. Br. 23. Appellant contends that Wellman's teaching of various aspects of the system in paragraphs 0115 (checklist verification), 0178 (warehouse management system ("WMS") integration), and 0205 (dashboard), do not teach the "species of groups of elements" which make up the separate steps for "updating continuously." *See id.* at 23–25.

We are not persuaded by Appellant's argument. As discussed *supra*, Wellman teaches that the operators may actively monitor their assigned tasks and skills using statistics or feedback provided by the system. Wellman ¶ 147. Wellman further teaches assigning operator ratings using actual-monitored measures by monitoring and logging vehicle operation. *Id.* at ¶ 158. We find that, by combining active monitoring and feedback with monitoring actual measures for operator ratings, the prior art suggests continuously updating an operator-specific profile performance instance.

Appellant specifically contends that the prior art does not teach the separate steps of: (1) "querying at least one data source …"; (2) "utilizing the retrieved task records …"; and (3) "processing the performance measure … ." *See* App. Br. 23–25. We address each separate step below.

With respect to the step of "querying at least one data source to retrieve records associated with the predetermined vehicle task" within a defined window, Wellman teaches the WMS as a data source for task records. *See* Wellman ¶ 178. Wellman teaches that the WMS informs the operator about tasks with performance measures, e.g., pick-up and placement location, and the vehicle's information-linking device records the operator's activity. *See id.* at ¶ 179. Wellman teaches that "the information-linking device 38 may be able to understand the WMS instructions to the [vehicle] operator. Accordingly, the information-linking device 38 may be able to provide feedback to the [vehicle] operator to indicate that the proper loads are being handled and that load movements and other activities are being performed correctly." *Id.* Wellman therefore teaches querying the WMS to retrieve records associated with predetermined vehicle tasks within a defined window by blending vehicle data on performance measures with WMS assigned tasks, as is further taught by Kote. *See* Wellman ¶¶ 170, 178, 179; *see also* Kote ¶¶ 44, 49.

With respect to the step of "utilizing the retrieved task records to verify and select the industrial vehicle usage data that is linked to the identification of the vehicle operator and that is needed to evaluate the performance measure," Kote teaches using vehicle data to create a digital signature for a driver and thereby identify authorized vehicle users. Kote ¶ 44. Accordingly, Kote teaches using task records to verify and select data

linked to vehicle operator identification. *See id.* Furthermore, Wellman teaches that "when the operator logs into the [vehicle] … the customized settings are automatically recalled and implemented." Wellman ¶ 146. Accordingly, Wellman teaches retrieving data linked to vehicle operator identification. *See id.* at ¶¶ 145, 146. Blending vehicle task data from the WMS with operator identification data would have been motivated in order to enable a system to verify and link the correct data with operators to evaluate actual-monitored performance measures for feedback and operator ratings. *See id*. at ¶¶ 147, 158, 178.

With respect to the step of "processing the performance measure of the operator-specific performance profile instance utilizing the selected industrial vehicle usage data according to the associated rule," Wellman teaches processing WMS data and vehicle data for specific vehicle operators to indicate correctly performed activities. *See* Wellman ¶ 179. Wellman teaches that the system may further monitor actions implemented by vehicle operators and assign corrections. *See id.* at ¶¶ 143, 144. As discussed *supra*, Wellman teaches processing performance measures for vehicle operators by measuring specific thresholds and adjusting performance rating when performance measures exceed the thresholds. *See id.* at ¶ 158. Accordingly, Wellman teaches the step of processing performance measures of operator-specific profiles using vehicle data according to the associated rule.

Issue 3

Appellant argues that the Examiner erred in finding the combined cited prior art references teach or suggest a progress meter. App. Br. 26.

Analysis

Appellant contends Storzum's "'completion indication' [ ] cannot be reasonably construed as a progress meter as claimed." App. Br. 26. Appellant argues that "the system in Storzum merely assigns tasks, provides an 'expectation' of the time it takes to complete the tasks, and measures the actual time to complete the assigned tasks … Thus, Storzum is a stopwatch that requires task completion before any analysis is performed." *Id.* (emphasis omitted).

We are not persuaded by Appellant's argument. "Non-obviousness cannot be established by attacking references individually where the rejection is based upon the teachings of a combination of references. . . . [The reference] must be read, not in isolation, but for what it fairly teaches in combination with the prior art as a whole." *In re Merck & Co.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986). As discussed *supra*, Wellman and Kote teach or suggest a system for continuously updating the current state of a vehicle operator's performance profile. *See supra.* Wellman teaches a customized display that provides feedback based on an operator's profile so that the operator can actively monitor their assigned tasks. Wellman ¶¶ 147, 197. Storzum teaches a specific graphical display of "completion indicator 244" that "enables a worker to indicate completion of a work task." Storzum ¶ 40. It would have been obvious to a person of ordinary skill to provide Wellman's display with a completion indicator or progress meter to actively monitor the progress of assigned tasks. "[T]he analysis need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a

person of ordinary skill in the art would employ." *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007). Accordingly, we are not persuaded that the Examiner erred.

Issue 4

Appellant argues that the prior art cannot be combined because the combination would change the prior art's principle of operation. App. Br. 27.

Analysis

Appellant contends that "the Examiner must make numerous changes in the principle of operation of all of the cited references." App. Br. 27. Appellant contends that "the Examiner repeatedly commingles numerous unrelated features of Wellman to attempt to force the cited reference to read on the claimed invention." *Id.*

As discussed *supra*, picking and choosing from a prior art reference is entirely appropriate in an obviousness rejection. Appellant has not provided any evidence that such picking and choosing would have been beyond the level of ordinary skill in the art. *See generally* App. Br. "A person of ordinary skill is also a person of ordinary creativity, not an automaton." *KSR*, 550 U.S. at 421.

Appellant further contends that "the Examiner would have to change the principle of operation of Storzum from a 'stopwatch' that requires a task to be actually completed before reporting, to a progress meter." App. Br. 27.

We are not persuaded by Appellant's argument. The prior art references teach monitoring and assessing worker performance. Using a

progress meter or stopwatch interchangeably or concurrently would not have resulted in an "inoperable" monitoring system. *See In re Urbanski,* 809 F.3d 1237, 1244 (Fed. Cir. 2016) ("Nothing in the prior art teaches that the proposed modification would have resulted in an 'inoperable' process or a [] product with undesirable properties").

Finally, Appellant contends that combining Wellman's user logon with Kote's automatic user identification "would necessarily render the invention unsatisfactory for its intended purpose." App. Br. 28.

We are not persuaded by Appellant's argument. Kote expressly teaches that the digital signature may be used in cooperation with a user logon. *See* Kote ¶ 36. Specifically, Kote teaches "[a] fact that the vehicle operator may have a communications appliance that may identify the operator or even a pass card or card key is not conclusive evidence that the carrier of the communications appliance or key is actually the owner of same who is operating the vehicle." *Id.* Kote teaches that "using a combination of data from a mobile communications appliance connected to the network . . . in combination with data that is not necessarily linked to active driving might provide better evidence of who may actually be operating the vehicle at any given period." *Id.* Accordingly, Kote expressly suggests combining the digital signature with Wellman's logon system for actively monitoring and updating a vehicle operator's performance profile.

We consequently affirm the Examiner's rejection of claim 1. Appellant reiterates the arguments against claim 1 with respect to claims 2–8 and 10–22. App. Br. 28–29. For the reasons set forth *supra*, we affirm the Examiner's rejection of claims 2–8 and 10–22.

CONCLUSION

The rejection of claims 1–8 and 10–22 as unpatentable under 35 U.S.C. § 103(a), 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).

AFFIRMED

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
1, 2, 4–6, 16–22	103(a)	Wellman, Kote, Storzum	1, 2, 4–6, 16–22	
3, 10, 12	103(a)	Wellman, Kote, Storzum, Hulen	3, 10, 12	
7, 8, 11, 13, 14	103(a)	Wellman, Kote, Storzum, Adendorff	7, 8, 11, 13, 14	
15	103(a)	Wellman, Kote, Storzum, Williams	15	
Overall Outcome			1–8, 10–22	