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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte ERIC BERDINIS, SHAKIL BARKAT, and RICKY J. HOOBLER

Appeal 2018-004009
Application 14/851,431
Technology Center 2800

Before MAHSHID D. SAADAT, ALLEN R. MacDONALD, and
NABEEL U. KHAN, *Administrative Patent Judges*.

SAADAT, *Administrative Patent Judge*.

DECISION ON APPEAL

Pursuant to 35 U.S.C. § 134(a), Appellant¹ appeals from the Examiner's decision to reject claims 1–20. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

¹ We use the word Appellant to refer to “applicant” as defined in 37 C.F.R. § 1.42(a). Appellant identifies the real party in interest as Motorola Mobility LLC. Appeal Br. 2.

STATEMENT OF THE CASE

Introduction

Appellant's invention relates to wearable electronic devices. Spec.

¶ 2.

Representative Claims

Representative claims 1 and 16 under appeal read as follows;

1. A smart watch, comprising:

a watch casing;

a display disposed along the watch casing, the display comprising a plurality of pixels to present information on the display;

one or more processors, operable with the display, disposed within the watch casing; and

an energy storage device powering the one or more processors;

the one or more processors:

when an amount of stored energy in the energy storage device is above a predefined threshold, performing a timekeeping function and at least one additional function;

when the amount of stored energy in the energy storage device falls below the predefined threshold, disabling the at least one additional function while continuing to perform the timekeeping function; and

presenting the at least the time of day on only every other interlaced subset of the plurality of pixels.

16. A method of operating a smart watch, comprising

performing, with one or more processors of the smart watch, a timekeeping function and at least one other function while an amount of stored energy in an energy storage device is above a predefined threshold; and

when the amount of stored energy in the energy storage device falls below the predefined threshold, disabling the at least one other function by disabling a first operating system of a multi-operating system environment, while continuing to perform the timekeeping function by switching from the first operating system to a second operating system, the second operating system configured to perform fewer functions than the first operating system environment.

REFERENCES AND REJECTIONS

Claims 1, 4, 9, 10, 12, and 13 stand rejected under 35 U.S.C. § 103 as being unpatentable over Pattikonda (US 2014/0233356 A1; pub. Aug. 21, 2014) and NPL (Aguilar, Nelson, Android Gadget Hacks, *Save Battery Life on Android by Turning Off Pixels (No Root Required)* (accessed December 16, 2016), <http://android.wonderhowto.com/how-to/save-battery-life-android-by-turning-off-pixels-no-root-required-0158902/>). *See* Non-Final Act. 2–5.

Claims 2, 3, 6, and 11 stand rejected under 35 U.S.C. § 103 as being unpatentable over Pattikonda, NPL, and Ma (US 2015/0365892 A1; pub. Dec. 17, 2015). *See* Non-Final Act. 5–8.

Claim 5 stands rejected under 35 U.S.C. § 103 as being unpatentable over Pattikonda, NPL, and Pan (US 2015/0100621 A1; pub. Apr. 9, 2015). *See* Non-Final Act. 8–9.

Claims 7, 8, 14, and 15 stand rejected under 35 U.S.C. § 103 as being unpatentable over Pattikonda, NPL, and Hsaio (US 2016/0070326 A1; pub. Mar. 10, 2016). *See* Non-Final Act. 10–12.

Claims 16–20 stand rejected under 35 U.S.C. § 103 as being unpatentable over Ma and Pattikonda. *See* Non-Final Act. 12–14.

Claims 16–20 stand rejected under 35 U.S.C. § 103 as being unpatentable over Pattikonda and Ma. *See* Non-Final Act. 14–17.

ANALYSIS

We have reviewed the Examiner's rejections under 35 U.S.C. § 103 in light of Appellant's arguments in Appellant's Appeal Brief that the Examiner has erred. We are unpersuaded by Appellant's contentions and concur with the findings and conclusions reached by the Examiner as explained below.

Independent Claim 1

The Examiner finds the combination of Pattikonda and NPL teaches or suggests, *inter alia*, "presenting the at least the time of day on only every other interlaced subset of the plurality of pixels," as recited in claim 1. *See* Final Act. 2–4. The Examiner further finds Pattikonda discloses, *inter alia*, a wrist watch including a main body having a display, where the display is configured to output time information and other information. *See* Final Act. 2–3 (citing Pattikonda ¶ 59, Fig. 1); *see also* Pattikonda ¶¶ 45, 56. As further found by the Examiner, NPL discloses a black pixel overlay, or "mesh," displayed on a display screen, where the rendering of the mesh prevents the lightening of the associated pixels of the display screen, and where the level of the mesh can be configured to different variants of positions, including horizontal or vertical positions. *See* Final Act. 3 (citing NPL 1–6). According to the Examiner, it would have been obvious to a person of ordinary skill in the art, at the time of the claimed invention, to modify the time display disclosed in Pattikonda so that the time is only displayed on every other interlaced subset of the associated pixels of the display screen as taught by NPL in order to save power and increase the lifespan of the battery or other power source, an objective identified by both Pattikonda and NPL. *See* Final Act. 3–4.

Appellant contends Pattikonda fails to include a presentation of time where a portion of the presentation is presented on one subset, followed by no time presentation on the next interlaced subset, followed by another portion of the time presentation being presented on the next interlaced subject. *See* Appeal Br. 11. We are not persuaded by this argument because it addresses Pattikonda individually rather than the combination of Pattikonda and NPL. One cannot show non-obviousness by attacking references individually when the rejection is based on a combination of references. *See In re Merck & Co., Inc.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986); *see also In re Keller*, 642 F.2d 413, 425 (CCPA 1981). The Examiner did not rely solely upon Pattikonda to teach the claimed “presenting the at least the time of day on only every other interlaced subset of the plurality of pixels.” Instead, as described above, the Examiner relied upon Pattikonda for teaching the presentation of time data on a display, and further relied upon NPL for teaching the presentation of data on only every other interlaced subset of a plurality of pixels. Appellant’s argument does not address the combination of Pattikonda and NPL, and, thus, is not persuasive.

Appellant further contends NPL merely teaches turning off every one in ten pixels, and does not teach interlacing every other subset or presenting data on only every other interlaced subset of a plurality of pixels on a display. *See* Appeal Br. 12–15. We are not persuaded by this argument either. As correctly found by the Examiner, NPL discloses a plurality of mesh arrangements in addition to “one out of every ten pixels,” including horizontal or vertical meshes that teach or suggest the claimed “interlaced subset of the plurality of pixels.” *See* Ans. 2 (citing NPL 4–6). Thus, contrary to Appellant’s argument, NPL does teach presenting data on only

every other interlaced subset of a plurality of pixels on a display. In light of the above, we are not persuaded the Examiner erred in finding the combination of Pattikonda and NPL teaches or suggests all the elements of claim 1.

Independent Claim 16

The Examiner finds the combination of Ma and Pattikonda teaches or suggests, *inter alia*, “when the amount of stored energy in the energy storage device falls below the predefined threshold, disabling the at least one other function by disabling a first operating system of a multi-operating system environment, while continuing to perform the timekeeping function by switching from the first operating system to a second operating system, the second operating system configured to perform fewer functions than the first operating system environment,” as recited in claim 16. *See* Final Act. 12–16. The Examiner further finds Ma discloses, *inter alia*, a wearable device (*e.g.*, watch) that includes a non-power-saving operating system (*i.e.*, “Big Operating System” or “BOS”) and a power-saving operating system (*i.e.*, “Little Operating System” or “LOS”), where the watch operates in a non-power-saving mode (*i.e.*, a normal mode) under the BOS, where the watch operates in one of three power-saving modes (*i.e.*, a suspend mode, a hibernation mode, and a deep hibernation mode) under the LOS, and where the watches switches from the BOS to the LOS when a system loading status is less than a threshold value. *See* Final Act. 12–13, 15–16 (citing Ma ¶¶ 28–29, 31–34, Figs. 3, 4); *see also* Ma ¶ 35. As further found by the Examiner, Pattikonda discloses, *inter alia*, a power management system for a wrist watch that automatically disables high-power functions when an amount of power stored in a battery of the wrist watch goes below a predetermined level. *See* Final Act. 13–15 (citing Pattikonda ¶¶ 50, 60).

The Examiner indicates it would have been obvious to a person of ordinary skill in the art, at the time of the claimed invention, to start with the watch disclosed in Ma and modify the watch to use an amount of stored power in an energy storage device, as disclosed in Pattikonda, as a threshold value to trigger switching from the non-power-saving operating system to the power-saving operating system. *See* Final Act. 13. The Examiner additionally explains it would have been obvious to a person of ordinary skill in the art, at the time of the claimed invention, to start with the wrist watch disclosed in Pattikonda and modify the wrist watch disclosed in Pattikonda to utilize separate operating systems for respectively operating in a non-power-saving mode and a power-saving mode as disclosed in Ma. *See* Final Act. 16.

Appellant contends Ma fails to teach a predefined energy storage threshold, and thus, fails to teach switching operating systems when a predefined energy storage threshold is reached. *See* Appeal Br. 16. According to Appellant, Ma teaches switching operating systems based upon system loading rather than a predefined energy storage threshold. *See* Appeal Br. 17–19.

This argument is not persuasive because it addresses Ma individually rather than the combination of Pattikonda and Ma. The Examiner did not rely solely upon Ma to teach the claimed “when the amount of stored energy in the energy storage device falls below the predefined threshold . . . switching from the first operating system to a second operating system.” Instead, as described above, the Examiner relied upon Ma for teaching switching from a non-power-saving operating system to a power-saving operating system when a system loading status is less than a threshold value, and further relied upon Pattikonda for teaching disabling functions when the

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amount of power stored in a battery goes below a predetermined level.

Appellant's argument does not address the combination of Ma and Pattikonda, and, thus, is not persuasive.

Appellant further contends the Examiner's proposed modification of the wearable device disclosed in Ma to include the features disclosed in Pattikonda would change Ma's principle of operation because Ma specifically controls power consumption in its device based upon system loading to reduce power consumption of a wearable device while retaining the ability to deliver all features of the wearable device at all times, whereas Pattikonda discloses completely disabling features in order to control power consumption. *See* Appeal Br. 19–21. According to Appellant, the same is true regarding the Examiner's proposed modification of the device disclosed in Pattikonda to include the features disclosed in Ma. *See* Appeal Br. 21–22.

We are not persuaded by this argument either. As described above, Ma discloses switching from a non-power-saving operating system to a power-saving operating system. *See* Ma ¶ 35. The operation of the system in Ma does not change whether the switching is triggered by a system loading status falling below a predefined threshold value or by an amount of energy in a stored energy device falling below a predefined threshold value. In light of the above, we are not persuaded the Examiner erred in finding the combination of Pattikonda and Ma teaches or suggests all the elements of claim 16.

Conclusion

In view of the analysis above, we are not persuaded that the Examiner erred in finding the combination of Pattikonda with NPL or Ma teaches or suggests the subject matter of independent claims 1 and 16. Accordingly, we sustain the 35 U.S.C. § 103 rejections of claims 1 and 16, nor of

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dependent claims 2–15 and 17–20, for which Appellant presents no separate arguments. *See* Appeal Br. 11.

DECISION SUMMARY

In summary:

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
1, 4, 9, 10, 12, 13	103	Pattikonda, NPL	1, 4, 9, 10, 12, 13	
2, 3, 6, 11	103	Pattikonda, NPL, Ma	2, 3, 6, 11	
5	103	Pattikonda, NPL, Pan	5	
7, 8, 14, 15	103	Pattikonda, NPL, Hsaio	7, 8, 14, 15	
16–20	103	Ma, Pattikonda	16–20	
16–20	103	Pattikonda, Ma	16–20	
Overall Outcome			1–20	

TIME PERIOD FOR 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). *See* 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED