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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte PAUL JERAN

Appeal 2019-002174
Application 15/819,736
Technology Center 2800

Before LINDA M. GAUDETTE, MARK NAGUMO, and
DONNA M. PRAISS, *Administrative Patent Judges*.

PRAISS, *Administrative Patent Judge*.

DECISION ON APPEAL¹

Pursuant to 35 U.S.C. § 134(a), Appellant² appeals from the Examiner's decision to reject claims 1–10 and 13–15. We have jurisdiction under 35 U.S.C. § 6(b). We AFFIRM.

¹ In this Decision, we refer to the Specification filed Nov. 21, 2017 (“Spec.”), the Non-Final Office Action dated Aug. 3, 2018 (“Non-Final Act.”), the Appeal Brief filed Sept. 14, 2018 (“Appeal Br.”), the Examiner’s Answer dated Dec. 12, 2018 (“Ans.”), and the Reply Brief filed Jan. 16, 2019 (“Reply Br.”).

² We use the word “Appellant” to refer to “applicant” as defined in 37 C.F.R. § 1.42. Hewlett-Packard Development Company, LP is the applicant and also identified as the real party in interest. Appeal Br. 1.

STATEMENT OF THE CASE³

The invention relates to a printer cartridge for toner, ink, and other materials that also includes a memory enabling an information exchange between the cartridge and the printer controller. Spec. ¶ 2. The Specification describes using the memory on a printing material cartridge to ensure that a printer or group of printers will not print with an unauthorized cartridge. *Id.* ¶ 13.

Claims 1, 8, and 13, reproduced below, are illustrative of the subject matter on appeal (emphasis added).

1. A printing material cartridge to be installed in a printer having a printer controller, the cartridge comprising:
 - a container to contain a printing material; and
 - a memory to enable an exchange of information between the cartridge and the printer controller when the cartridge is installed in the printer, the memory including:
 - a first write once then read only memory with a first memory address;
 - a second write once then read only memory with a second memory address, *the first memory address having information to prompt the printer controller to write a printer identifier to the second memory address;* and
 - a memory controller to control data storage and retrieval to and from the write once then read only memories and to control the exchange of information with the printer controller.
8. A printing material cartridge, comprising:
 - a container containing a printing material; and

³ This appeal is related to Appeal Nos. 2018-005676, 2018-005677, and 2019-002214. *See* Appeal Br. 1 (identifying Appeal No. 2018-005676 and the Notice of Appeal filed in Appeal No. 2019-002214).

a memory to enable an exchange of information between the cartridge and a printer controller when the cartridge is installed in a printer, the memory storing *an identifier identifying a fleet of printers authorized to use the cartridge.*

13. A printing material cartridge, comprising:

a container containing a printing material; and

a write once then read only memory affixed to the container, *the memory including a single bit first address for a printer identification prompt and a second address for a printer identifier:*

the single bit first address having:

a logic 1 state representing a prompt value to, during an authorization process when a cartridge with the memory is installed in a printer, prompt a printer controller to read the second address; or

a logic 0 state representing a no prompt value to, during an authorization process when a cartridge with the memory is installed in a printer, end the authorization process; and

the second address having:

an identification value with a printer identifier; or

a no identification value to, during the authorization process, prompt a printer controller reading the second memory address to write a printer identifier to the second memory address.

Appeal Br. 11, 12 (Claims Appendix).

ANALYSIS

We review the appealed rejections for error based upon the issues Appellant identifies, and in light of the arguments and evidence produced thereon. *Ex parte Frye*, 94 USPQ2d 1072, 1075 (BPAI 2010) (precedential) cited with approval in *In re Jung*, 637 F.3d 1356, 1365 (Fed. Cir. 2011) (“[I]t has long been the Board’s practice to require an applicant to identify

the alleged error in the examiner's rejections.”). After considering the argued claims in light of the evidentiary record and the case law presented in this Appeal, and each of Appellant's arguments, we are not persuaded of reversible error in the Examiner's rejections.

The Examiner rejects claims 1–10, 13, and 15 under 35 U.S.C. § 103 over Kondo⁴ in view of Johnson⁵ for the reasons provided on pages 3–12 of the Non-Final Action. The Examiner also rejects claim 14 under 35 U.S.C. § 103 over the combination of Kondo and Johnson in further view of Asauchi⁶ for the reasons provided on pages 12–14 of the Non-Final Action.

Appellant separately argues independent claims 1, 8, 13, and dependent claim 10, and groups together dependent claims 2 and 15⁷ with claim 8. Appeal Br. 3–10. Therefore, in view of the lack of arguments directed to the remaining dependent claims, claims 3–7 stand or fall with claim 1, claims 2, 9, and 15 stand or fall with claim 8. *See* 37 C.F.R. § 41.37(c)(1)(iv). We consider the arguments advanced by Appellant in support of patentability of claim 13 to the extent applicable to the separate rejection of claim 14. We separately address claims 1, 8, 10, and 13 below.

⁴ US 2008/0219692 A1, published Sept. 11, 2008.

⁵ US 2004/0212651 A1, published Oct. 28, 2004.

⁶ US 2010/0253718 A1, published Oct. 7, 2010.

⁷ In the heading on page 4 of the Appeal Brief, Appellant groups together independent claim 8 and dependent claims 2 and 15. We understand Appellant's references to claim 13 in the argument that follows the heading to be a typographical error for claim 15, because the argument is based on a claim limitation that appears in claim 15 but not in claim 13.

Claim 1

Appellant contends that the Examiner erred in finding that the combination of Kondo and Johnson discloses a cartridge memory with a prompt at one memory address for a printer to write a printer identifier to a second, different memory address when the cartridge is installed in the printer as required by claim 1. Appeal Br. 5. According to Appellant, Kondo does not disclose a printer prompt because Kondo's process for writing cartridge identification information to ROM region 322 in cartridge memory 32 is from an "external apparatus" rather than from Kondo's printer. *Id.* at 5–7 (citing Kondo ¶¶ 33, 34, 38–41, Figs. 1, 4).

Appellant concurs that Johnson's memory 21 includes a memory address at which printer identifier 14 is stored. *Id.* at 7. Appellant argues, however, that "there is no other address in Johnson's memory 21 with a prompt to prompt the printer controller to write an identifier 14 to memory 21." *Id.* Appellant notes that Johnson discloses that printer 12 queries the component to determine whether printer identifier 14 stored in component memory 21 matches the ID for printer 12. If the answer is no, the printer queries the component a second time to determine whether the component is new. If the answer to the second query is yes, then the printer writes its own ID to memory 21. *Id.* at 7–8 (citing Johnson ¶¶ 48–50, Fig. 6, steps 304, 306, 308, 310). Appellant contends "it seems likely the printer writes this ID to the same address queried in step 304 — the address of printer identifier 14 in memory 21" — rather than another different memory address. *Id.* at 8.

The Examiner responds that both Kondo and Johnson disclose a cartridge memory with a prompt at one memory address for a printer to write a printer identifier to a second different memory address when the cartridge

is installed in the printer. Ans. 5. The Examiner finds that Kondo discloses cartridge memory 32 with multiple memory addresses in Figure 3 and a prompt in S1 of Figure 4 to prompt the controller to write identification information to a second memory address in S2. *Id.* (citing Kondo Figs. 3, 4). The Examiner finds that Kondo’s “external apparatus” is external to the cartridge and, thus, includes the printer, and that the main CPU of the printer, which is the only other CPU disclosed in Kondo, communicates with the cartridge. *Id.* (citing Kondo ¶¶ 33, 42, Fig. 2). Kondo’s Figures 3(A) and 4 are shown below:

Fig. 3
 (A)

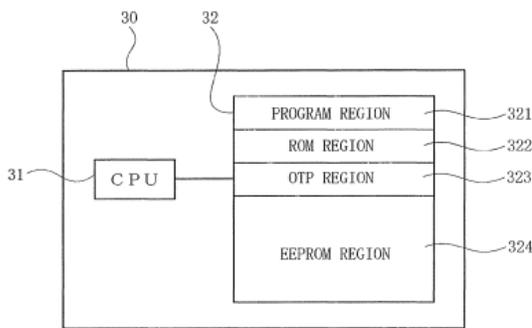


Fig. 4

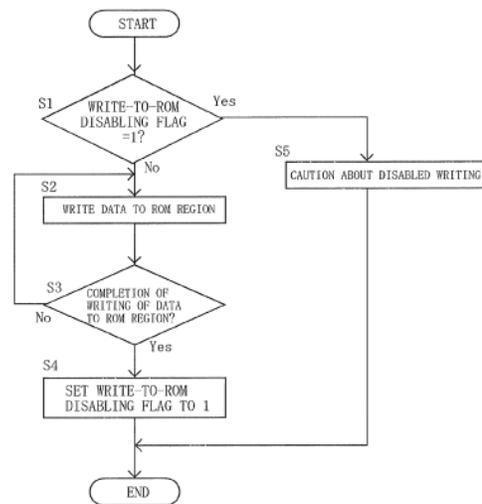


Figure 3(A) shows cartridge chip 30 with flash memory 32 having multiple regions including read only memory (ROM) region 322, and Figure 4 is a flow chart showing the steps of writing cartridge identification information to a ROM region of a flash memory. Kondo ¶¶ 16, 17.

The Examiner finds that Johnson discloses a memory with multiple memory addresses. *Id.* at 6 (citing Johnson ¶ 27, Fig. 2, memory 21). Johnson’s Figure 2 is reproduced below.

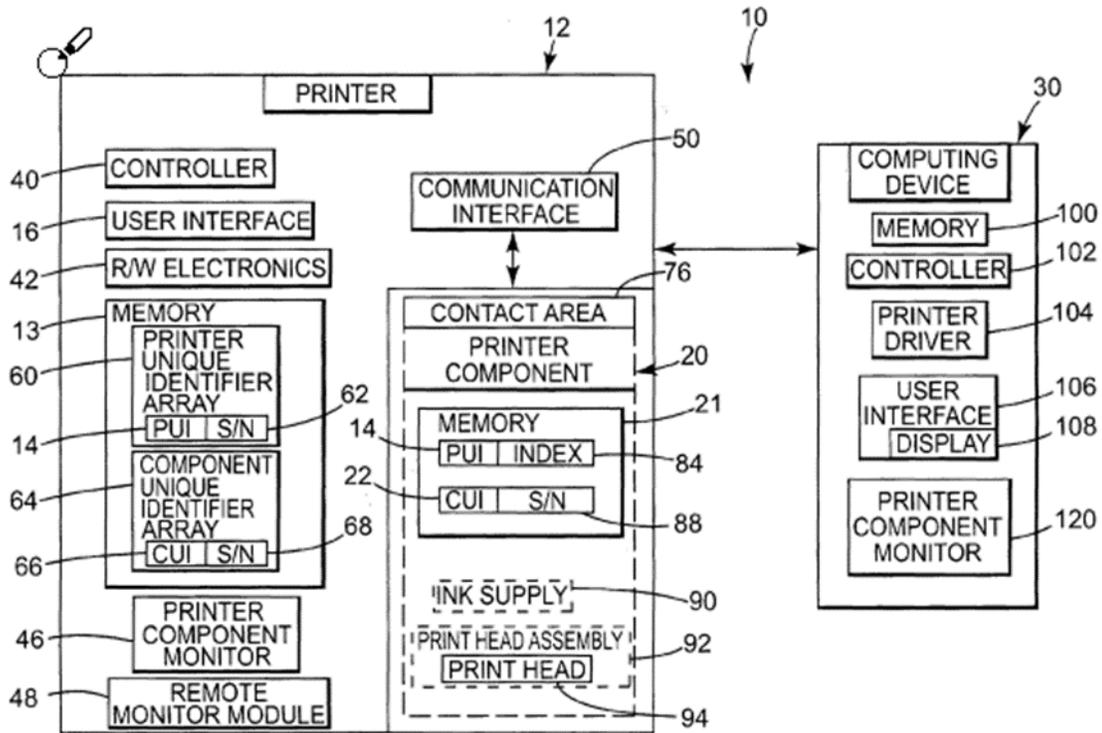


Fig. 2

Figure 2 is a block diagram of replaceable printer component system 10. Johnson ¶ 7. As shown in Figure 2, printer component 20 comprises memory 21 which includes at least one printer unique identifier (PUI) 14 and component unique identifier 22. *Id.* ¶ 27. According to Johnson, PUI index 84 stores a list of printers for which use with printer component 20 is authorized. *Id.*

The Examiner finds that Johnson queries (step 304 prompt) whether the printer has a unique identifier and discloses a further query in step 308 at a second memory address. Ans. 6 (citing Johnson ¶ 48, Fig. 5, Fig. 6, steps 304, 308). Johnson’s Figure 6 is reproduced below.

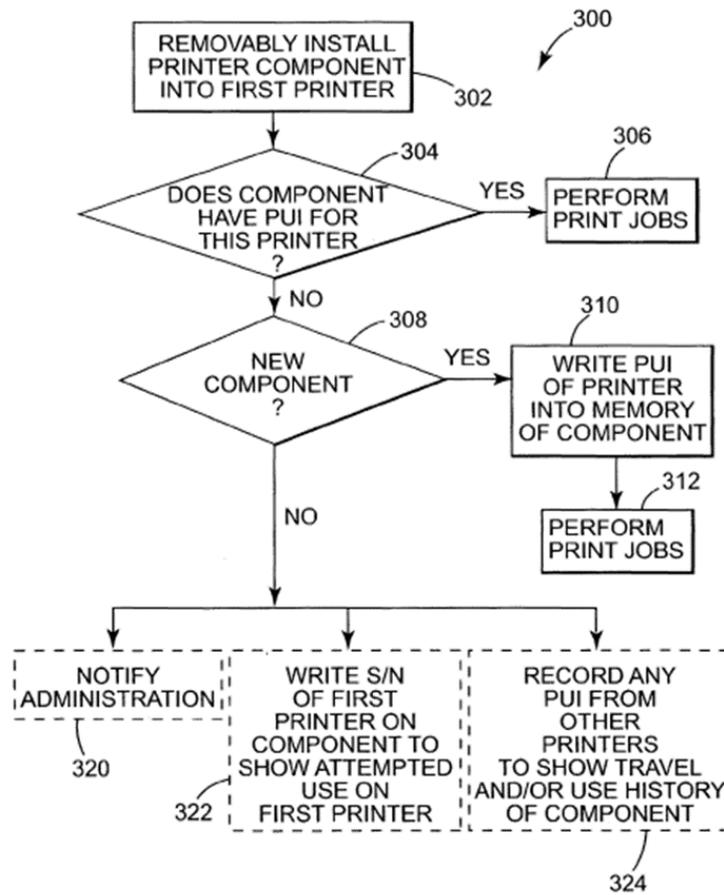


Fig. 6

Figure 6 is a flow diagram of a method of managing a replaceable printer component tool. Johnson ¶ 11. According to Johnson, step 304 queries whether a printer unique identifier 14 stored in memory 21 matches the printer unique identifier of the printer into which printer component 20 is installed. *Id.* ¶ 48. Johnson discloses that an affirmative response results in permitting print jobs and other functions (step 306). *Id.* ¶ 49. Johnson describes a negative response resulting in a further query (step 308) as to whether printer component 20 is a new component that has not been installed previously on any printer. *Id.* As shown in Figure 6, regardless of whether the response to the query of step 308 is affirmative or negative, the

controller is prompted to write to memory (shown as separate boxes 310 or 322).

The Examiner further finds that Johnson discloses writing a serial number (S/N) onto the memory of the cartridge in step 322 of Figure 6 if the step 304 and step 308 queries are negative. Thus, the Examiner finds Johnson discloses an address for a printer identification “prompt” and a separate address for a printer “identifier” as required by claim 1. Ans. 6.

In the Reply Brief, Appellant contends that Kondo’s “external apparatus” writes the cartridge identification information to the cartridge memory chip before the cartridge is installed in an “image forming apparatus,” therefore, “[i]t makes no sense” for the printer and the “external apparatus” to be one and the same because if the printer already knows what it will write and what it will read, it already knows whether or not the cartridge is suitable for use without writing to or reading from the cartridge. Reply Br. 1–2. According to Appellant, what makes sense is that the external apparatus writes the information and the printer reads the information. *Id.* at 2 (citing Kondo ¶¶ 33, 42, Figs. 1, 4). Appellant maintains that Johnson’s printer identifier 14 exists at a single memory address and, therefore, cannot be both a prompt or a no prompt value at one address and an identification value at another address. *Id.* at 3.

Appellant’s arguments do not persuade us that the Examiner reversibly erred in rejecting the claims as obvious over the teachings of Kondo and Johnson. Specifically, we are not persuaded that the Examiner erred in finding that Kondo discloses a cartridge memory with a prompt at one memory address for a printer to write identification information to a second memory address and that Johnson’s replaceable printer component

comprises a memory address that prompts a printer controller to write a fleet identifier to a memory address separate from the memory address storing a prompt, as claim 1 requires. The preponderance of the evidence in this appeal record supports the Examiner's conclusion that the claimed subject matter would have been obvious in view of Johnson. Accordingly, we sustain the Examiner's rejection for essentially those reasons expressed in the Answer, including the Response to Argument section, and we add the following primarily for emphasis.

In rejecting claims under 35 U.S.C. § 103, it is incumbent upon the Examiner to establish a factual basis to support the legal conclusion of obviousness. *See In re Fine*, 837 F.2d 1071, 1073 (Fed. Cir. 1988). In so doing, the Examiner must make the factual determinations set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966) (noting that 35 U.S.C. § 103 leads to three basic factual inquiries: (1) the scope and content of the prior art; (2) the differences between the prior art and the claims at issue; and (3) the level of ordinary skill in the art). If the Examiner's burden is met, the burden then shifts to the Appellant to overcome the prima facie case with argument and/or evidence. Obviousness is then determined on the basis of the evidence as a whole and the relative persuasiveness of the arguments. *See In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992).

Appellant does not dispute the Examiner's findings (Ans. 5–6) that both Kondo and Johnson disclose a printer cartridge comprising memory with multiple memory addresses. Appellant does not dispute the Examiner's findings (*id.* at 5) that Kondo discloses the main CPU of the printer communicates with Kondo's printer cartridge and that S1 in Kondo's Figure 4 is a prompt to the controller. Appellant does not dispute the Examiner's

finding (*id.* at 6) that Johnson’s printer controller queries the memory of the cartridge and is prompted to write a printer identifier to the memory when a cartridge with the memory is installed in a printer. Appellant does not dispute the Examiner’s finding (*id.*) that Johnson discloses multiple queries are made by Johnson’s controller.

The record supports the Examiner’s finding (Ans. 5) that Kondo discloses a prompt to write identification information to a second memory address when the printer cartridge is installed. Kondo ¶ 39, Fig. 4, S1, S2. Appellant acknowledges that Kondo discloses a process for writing cartridge identification information to ROM region 322 in cartridge memory 32 at paragraphs 33 and 34 and again at paragraphs 38–41. Appeal Br. 5–6. Kondo further discloses that this command is through disclosed “serial communications.” Kondo ¶ 33. The record supports the Examiner’s finding (Non-Final Act. 4) that Kondo’s cartridge and printer controller exchange information “via three signal lines 5A to 5C so that serial communications may be carried out therebetween.” Kondo ¶ 26. Appellant’s assertion (Appeal Br. 7; Reply Br. 2) that the write to ROM prompt to write the identification information to the cartridge’s ROM region 322 comes from an “external apparatus” that is not only external to the cartridge, but excludes the printer specifically, is not supported by the preponderance of the evidence in this appeal record. Appellant’s argument is not persuasive because Kondo uses the term “external apparatus” in one instance as an example for the function, and therefore this term is not limiting as to the apparatus itself. Kondo ¶ 33 (“An external apparatus, for example, may send a write-to-ROM command to the CPU 31 by way of the serial communications.”).

Appellant's argument is also not persuasive of error because the rejection is over the combination of Kondo and Johnson and the Examiner relies on Johnson for disclosing writing a printer identifier to the memory of the cartridge. Non-Final Act. 4–5 (citing Johnson ¶¶ 48–53, Fig. 6). The record supports the Examiner's finding (Ans. 6) that Johnson discloses a query (prompt) for whether the printer has a unique identifier. Johnson ¶ 48, Fig. 6, 304. The record also supports the Examiner's finding that a further query in step 308 (Johnson Fig. 6, 308) indicates the query is subsequent to the query in step 304 and, therefore, has its own memory location. Appellant's position (Reply Br. 3) that the Examiner's finding is insufficient to establish obviousness by the combination of Kondo and Johnson is not persuasive of error, because it does not adequately show that Johnson's printer controller is not set up to write a printer ID to another memory address or that it would not have been obvious to do so, particularly in view of Johnson's memory having multiple memory addresses.

The record also supports the Examiner's finding (Ans. 6) that Johnson discloses writing a serial number into the memory of the cartridge in response to a negative prompt that is separate from the identifier located at a unique address in the memory. Johnson ¶ 51. Appellant asserts that, because Johnson does not say where in memory 21 the printer writes its own ID at step 310 shown in Figure 6, the printer "likely" writes this ID to the same address queried in step 304. Appeal Br. 8. Appellant's position that the memory address to which Johnson writes this ID is "likely" to be one of Johnson's multiple memory addresses indicates the obviousness of Johnson's printer writing to an alternative memory address instead. Appellant's argument, therefore, is not persuasive of Examiner error in

concluding that it would have been obvious from Johnson's disclosure for the printer to write to a different memory address.

Moreover, Johnson's paragraph 51 discloses that printer 12 writes a serial number into the memory of the printer component at a negative response prompt (because the printer component had been previously installed elsewhere) in order to save the information in printer 12 for tracking the presence of printer component 20 (shown in box 324 of Fig. 6) and a travel/use history of printer component 20 can be obtained from the memory of printer component 20 as well (box 322 of Fig. 6). Appellant does not adequately explain why the same memory location for printer identifier 14 necessarily would have been used for tracking the travel/use history of printer component 20. Nor does Appellant adequately explain why a skilled artisan would have understood the separate boxes in the Figure 6 flow diagram for writing printer unique identifiers to be the same memory location rather than separate memory locations, particularly in view of Johnson's memory 21 having multiple addresses.

Accordingly, we affirm the Examiner's rejection of claim 1 as well as claims 3–7 under 35 U.S.C. § 103 over Kondo and Johnson.

Claim 8

Appellant argues that the Examiner erred in rejecting claim 8 because Johnson's disclosure that printer identifier 14 may identify multiple printers does not disclose that printer identifier 14 is used to identify "a group of printers owned or operated by a single entity or identified as being subject to an obligation to limit printing to the group." Appeal Br. 4 (citing Johnson ¶ 20). According to Appellant, "fleet" is "specially defined to cover the commercial situation in which 'the parties to a print services contract may

wish to limit printing to specific cartridges supplied under the contract.” *Id.* (quoting Spec. ¶ 13).

The Examiner responds that Johnson’s disclosure that a printer unique identifier uniquely identifies one or more printers for association with the printer component renders this claim limitation obvious. Ans. 4 (citing Johnson ¶ 20). The Examiner determines that a “fleet” is “a group operated under unified command.” *Id.* The Examiner finds that Johnson’s disclosure that its identifier “represents one or more printers for which use of the printer component is exclusively authorized” and that “[t]he same single printer unique identifier 14 or plurality of different printer unique identifiers 14 can be written into every printer component array 254” teaches “a single identifier identifying a group of printers owned by a single entity” and “a single identifier identifying a group of printers identified as being subject to an obligation to limit printing to the group.” *Id.* (citing Johnson Abstract, ¶¶ 5, 39, 42, Figs. 4, 5).

We are not persuaded by Appellant’s arguments that the Examiner reversibly erred in rejecting claim 8. Appellant does not dispute the Examiner’s finding (Ans. 4) that Johnson discloses a unique identifier that represents one or more printers for which use of the printer component is exclusively authorized. Appellant’s assertion that “[t]he distinction between multiple printers in general and the specific group of printers in a fleet is significant” is based on a “commercial situation” or purpose. Reply Br. 1. The Examiner’s determination (Non-Final Act. 8; Ans. 4) that it would have been obvious from Johnson’s disclosure that the identified printers are a “fleet” of printers in order for the cartridge to work properly with multiple printers is supported by the record. Johnson discloses an association of

multiple printers with its printer components and that the purpose of the printer component comprising a memory that stores an identifier for one or more printers is to ensure the “authorized” use of the printer component. Johnson Abstract, ¶ 20. Similarly, Appellant’s printing material cartridge memory “ensure[s] that a printer will not print with an unauthorized cartridge.” Spec. ¶ 13. Therefore, Johnson’s use of an identifier to associate multiple printers for the purpose of ensuring “authorized” use with a printing material cartridge serves the same commercial function as Appellant’s fleet identifier that “limit[s] printing to the group.” *Compare* Spec. ¶ 15, with Johnson Abstract.

Accordingly, we affirm the Examiner’s rejection of claim 8 as well as claims 2, 9, and 15 under 35 U.S.C. § 103 over Kondo and Johnson.

Claim 10

Appellant contends that the combination of Kondo and Johnson does not disclose a cartridge memory with a prompt at one memory address for a printer to write a printer identifier to a second, different memory address as argued with respect to claim 1. Appeal Br. 9–10. Because we are not persuaded of error by Appellant’s arguments challenging the rejection of claim 1, we affirm the Examiner’s rejection of claim 10 under 35 U.S.C. § 103 over Kondo and Johnson for the same reasons discussed above in connection with claim 1.

Claim 13

In addition to the arguments presented with respect to claim 1 distinguishing the disclosures of Johnson (Appeal Br. 5–7), which we do not

find persuasive of error as discussed above, Appellant contends that the Examiner erred in rejecting claim 13 because Kondo does not disclose a single bit one-time programmable region 323 in the cartridge memory that meets the prompt/no prompt value limitation on the first memory address. *Id.* at 8–9. According to Appellant, Kondo’s OTP region 323 is not involved in writing or reading cartridge identification. *Id.* at 9. Appellant contends that Kondo’s cartridge identification information is written to ROM region 322 and the control program used to write the cartridge information resides in EEPROM region 324. *Id.* (citing Kondo ¶ 33). Appellant asserts that Johnson also does not disclose this limitation because Johnson discloses only one memory address related to the printer ID. *Id.*

The Examiner responds that Kondo discloses writing data to other regions and specifically states that the OTP region 323 may be used to store an information piece indicating an event occurring only once such as using bitwise data to set up a flag. Ans. 7 (citing Kondo ¶¶ 30, 31). The Examiner responds that Johnson also discloses the value limitations of claim 13 because Johnson teaches that “memory 21 optionally comprises a one-time writable memory so that only one printer unique identifier 14 can be written to printer component 20 only a single time.” *Id.* (quoting Johnson ¶ 28). The Examiner explains that Johnson’s printer controller queries the cartridge memory and is prompted to write a printer identifier to the memory when a cartridge with memory is installed in a printer. *Id.* (citing Johnson ¶¶ 48–53, Fig. 6).

In the Reply Brief, Appellant reiterates that Kondo does not describe a printer prompt as recited in claim 1, that the same analysis applies to claim 13 which requires a single bit first memory address for a printer

identification prompt with a second address for a printer identifier, that Johnson does not disclose the elements missing from Kondo, and that Johnson's controller does not prompt a memory address different from the address of the printer identifier. Reply Br. 3.

Appellant's arguments do not persuade us that the Examiner reversibly erred in rejecting the claims over the cited prior art references. As discussed above in connection with claim 1, we are not persuaded of error in the Examiner's finding that Kondo and Johnson both disclose memory information being used as a prompt and that Johnson discloses writing identifier information in response to a prompt that is separate from the identifier located at a unique address in the cartridge memory. The record also supports the Examiner's finding that Kondo discloses that OTP region 323 may be used to store information for a single event with bitwise data and that writing data can be to regions other than to ROM region 322. Kondo ¶¶ 30, 31. Therefore, Kondo's disclosure is not limited to ROM region 322 for writing Kondo's cartridge identification information as Appellant contends (Appeal Br. 9). In a determination of obviousness, a reference may be relied upon for all that it would have reasonably suggested to one having ordinary skill in the art. *Merck & Co. v. Biocraft Labs.*, 874 F.2d 804, 807 (Fed. Cir. 1989) ("That the [prior art] patent discloses a multitude of effective combinations does not render any particular formulation less obvious."). Moreover, "a reference is not limited to the disclosure of specific working examples." *In re Mills*, 470 F.2d 649, 651 (CCPA 1972) (citation omitted).

Accordingly, we affirm the Examiner's rejection of claim 13 under 35 U.S.C. § 103 over Kondo and Johnson, as well as the rejection of claim 14 under 35 U.S.C. § 103 over Kondo, Johnson, and Asauchi.

For these reasons and those the Examiner provides, we uphold the Examiner's rejections of claims 1–10 and 13–15 under 35 U.S.C. § 103 as obvious over the cited prior art references.

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).

CONCLUSION

In summary:

Claims Rejected	35 U.S.C. §	Basis	Affirmed	Reversed
1–10, 13, 15	103	Kondo, Johnson	1–10, 13, 15	
14	103	Kondo, Johnson, Asauchi	14	
Overall Outcome			1–10, 13–15	

AFFIRMED