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EXAMINER	
FISHER, PAUL R	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

docketing@olpatentlaw.com

Office Action Summary	Application No. 12/429,775	Applicant(s) BROWN ET AL.	
	Examiner PAUL R. FISHER	Art Unit 3689	AIA (First Inventor to File) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 October 2015*.

☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims*

5)☒ Claim(s) *1-20* is/are pending in the application.

5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6)☐ Claim(s) _____ is/are allowed.

7)☒ Claim(s) *1-20* is/are rejected.

8)☐ Claim(s) _____ is/are objected to.

9)☐ Claim(s) _____ are subject to restriction and/or election requirement.

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.

Application Papers

10)☐ The specification is objected to by the Examiner.

11)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

a)☐ All b)☐ Some** c)☐ None of the:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

** See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b) Paper No(s)/Mail Date _____.

3) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

4) ☐ Other: _____.

DETAILED ACTION

1. Amendment filed on October 19, 2015, has been acknowledged. Claims 1-20, as currently amended, are pending and have been considered below.

Notice of Pre-AIA or AIA Status

2. The present application is being examined under the pre-AIA first to invent provisions.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112(a):

> (a) IN GENERAL.—The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor or joint inventor of carrying out the invention.

The following is a quotation of the first paragraph of pre-AIA 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1-20 are rejected under 35 U.S.C. 112(a) or 35 U.S.C. 112 (pre-AIA), first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor or a joint inventor, or for pre-AIA the inventor(s), at the time the application was filed, had possession of the claimed invention. The newly amended limitation of "wherein only said parent component is customer replaceable", which is considered new matter. The applicant's

originally filed specification paragraph [0010] states who can replace the components but does explicitly exclude other parties from replacing these items. Further the applicant's arguments on page 15 state "the child component represents a service item that can be potentially replaced but not repaired by the customer", which contradicts the claims as amended since they state that the child component cannot be replaced by the customer. Since these exclusions are not found in the applicant's originally filed specification and contradict the applicant's own remarks they are considered to be new matter.

Claim Rejections - 35 USC § 101

5. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

6. Claims 1-20 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. When considering subject matter eligibility under 35 U.S.C. 101, it must be determined whether the claim is directed to one of the four statutory categories of invention, i.e., process, machine, manufacture, or composition of matter. If the claim does fall within one of the statutory categories, it must then be determined whether the claim is directed to a judicial exception (i.e., law of nature, natural phenomenon, and abstract idea), and if so, it must additionally be determined whether the claim is a patent-eligible application of the exception. If an abstract idea is present in the claim, any element or combination of elements in the

claim must be sufficient to ensure that the claim amounts to significantly more than the abstract idea itself. Examples of abstract ideas include fundamental economic practices; certain methods of organizing human activities; an idea itself; and mathematical relationships/formulas. *Alice Corporation Pty. Ltd. v. CLS Bank International, et al.*, 573 U.S. (2014).

In the instant case, claims 1-14 are directed to a process or method and claims 15-19 are directed to an apparatus or system and claim 20 is a directed toward a medium or product.

Additionally, the claims are directed towards managing the service of items which is considered to be an abstract idea inasmuch as configuring relationships, monitoring the status of items, replacing items when necessary and performing service actions such as replacing or repairing an item are activities that are considered both fundamental economic or business practices and methods of organizing human activity.

The elements in the instant claims (a processor, data bus, medium and XML), when taken in combination, together do not offer "significantly more" than the abstract idea itself because the claims do not recite an improvement to another technology or technical field, an improvement to the functioning of the computer itself, or provide meaningful limitations beyond generally linking an abstract idea to a particular technological environment. It should be noted the limitations of the current claims are performed by a generically recited processor and the memory and program components contain no more than mere instructions to implement the abstract idea on a computer.

The claims require no more than a generic computer to perform generic computer functions that are well-understood, routine and conventional activities previously known to the industry. As such the claims simply describe a problem, announce purely functional steps that purport to solve the problem, and recite standard computer operations to perform some of those steps, which is not "significantly more" than an abstract idea. Therefore, claims 1-20 are directed to non-statutory subject matter.

Claim Rejections - 35 USC § 103

7. The following is a quotation of pre-AIA 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. **Claims 1 and 2 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Siegel et al. (6,754,453) hereafter Siegel, in view of Katoh (7,865,090) here after Katoh, further in view of Vinberg et al. (7,797,147) hereafter Vinberg**.

As per Claim 1, Siegel et al. discloses a method for managing high frequency service items (Col. 2, Line 65-Col. 3, Line 4, discloses a method for tracking the usage of high frequency service items) associated with a rendering device, said method comprising:

at least one high frequency service items that is associated with and a component of said rendering device comprising a parent component and at least one child component (Col. 2, Line 65-Col. 3, Line 4, discloses high frequency service items (i.e. parent components) having parts (i.e. child components) comprised within a document processing system (i.e. a device));

associated with said rendering device and at least one child component comprising at least one sub-part of said parent component wherein only said parent component is customer replaceable (Col. 2, Line 65-Col. 3, Line 4, discloses high frequency service items (i.e. parent components) having parts (i.e. child components) comprised within a document processing system (i.e. a device), the fact that the child component is not customer replaceable does not change or alert steps in anyway as it does not describe the steps but rather the title of person performing them. Further this does not change the structure as it does not change how the components are made or how they function, please see MPEP 2111.05, specifically as stated "**the court noted that a "'whereby clause in a method claim is not given weight when it simply expresses the intended result of a process step positively recited.'" *Id.* (quoting *Minton v. Nat'l Ass'n of Securities Dealers, Inc.*, 336 F.3d 1373, 1381, 67 USPQ2d 1614, 1620 (Fed. Cir. 2003)).**" In this case the positively recited step is configuring and the title given to the person who performs this step does change the step itself, but is merely directed toward a particular user performing an action outside the scope of the claim);

monitoring a status of said at least one high frequency service item with respect to a threshold value, replacing said parent component if said at least one child component associated with said high frequency service items exceeds said threshold value for said service action (Col. 1, Lines 24-50, discloses the concept of monitoring high frequency service items with respect to a predetermined value (i.e. threshold value) wherein when a high frequency service item part (i.e. child component) reaches a predetermined value, service on the part is needed. Col. 1, Lines 24-50, discloses replacing a high frequency service item part); and

performing a service action to said at least one child component associated with said parent component on replacement of said parent component in order to retain life of said parent component, thereby maximizing a utilization of said at least one high frequency service item and a reliability with respect to said device (Col. 1, Lines 24-50, discloses replacing a high frequency service item part, Col. 2, lines 7-24, shows that the action can also be repairing of the parts based on the threshold values).

However, Siegel et al. fails to explicitly disclose configuring and monitoring a parent/child relationship in association with at least one item utilizing an XML based computer system; and providing an indicator for replacing a parent component being displayed upon said child component exceeding said threshold value.

Katoh teaches a maintenance management system with the concept of configuring a parent/child relationship is association with at least one item (Col. 11, Line 64-Col. 12, Line 3; Col. 15, Lines 9-23, discloses the concept of identifying parent-child relationships of components in association with an item); and providing an indicator for

replacing a parent component being displayed upon said child component exceeding said threshold value (Col. 2, Lines 51-67, discloses an image forming apparatus (i.e. parent component) having an alarm output unit (i.e. child component) that displays an indication that a component has exceed the remainder day reference value (i.e. threshold value)).

Katoh further teaches replacing items based on threshold, creating a maintenance plan with an individual component identifier with its own plan and replacing the component when the threshold is achieved (Col. 16, lines 35-63; teaches tracking each component and naming each component with an individual component identifier and replacing the component when the threshold or alarm limit is reached).

Therefore, from the teaching of Katoh, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method and system for assessing an end of life in a system of Siegel et al. to include configuring a parent/child relationship in association with at least one item; and providing an indicator for replacing a parent component being displayed upon said child component exceeding said threshold value as taught by Katoh in order to manage the service needs regarding an item wherein one component may affect the service quality of another component based on their relationship.

The combination fails to explicitly state that utilizing an XML based computer system.

Vinberg et al. discloses a system and method for monitoring components with the concept of configuring parent-child relationship in association with at least one item

utilizing an XML based file in a XML based computer system (Col. 3, Lines 15-52; Col. 5, Line 65-Col. 6, Line 7, discloses developing a parent-child relationship in association with an item wherein utilizing a file encoded in XML).

Therefore, from the teaching of Vinberg et al., it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Siegel et al. and Katoh combination to include the well-known concept of configuring parent-child relationship in association with at least one item utilizing an XML based file to yield the predictable result of providing the ability to transmits the data file to a plurality of users having various data structures.

As per Claim 2, Siegel et al. discloses the concept service counts being associated with components of a document processing system wherein a high frequency service item counter is reset to zero when the part is replaces (via Col. 1, Lines 24-50). Katoh discloses the concept of performing a service action on a parent component wherein the child components are also replaced as a result (via Col. 16, Line 64-Col. 17, Line 16).

However, the Siegel et al. and Katoh combination fails to explicitly disclose the service count associated with a child component to follow a count associated with the parent component upon replacement of parent component after performing a service action.

Examiner asserts it would have been obvious to one of ordinary skill in the art at the time the invention was made to have the counter for the parts of the high frequency service item as disclosed in Siegel et al. be reset when the high frequency item (i.e.

parent component) itself is replaced since all the parts (i.e. child components) are being replaced as a result of the high frequency item being replaced in order to adequately monitor the useful life remaining for all the components.

9. **Claims 3-6 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Siegel et al. (6,754,453) hereafter Siegel, in view of Katoh (7,865,090) here after Katoh, further in view of Vinberg et al. (7,797,147) hereafter Vinberg, further in view of Sheu et al. (1996) hereafter Sheu**.

As per Claim 3, the Siegel et al., Katoh and Vinberg discloses the concept of resetting counter corresponding to a component after a service action has been performed on the component. However, the Siegel et al. and Katoh combination fails to explicitly disclose the concept of replacing at least one component after a certain number of service actions (i.e. repairs) have been done.

Sheu et al. discloses the concept of determining a replacement policy for a system with the concept of replacing at least one component after a certain number of service actions (i.e. repairs) have been done (Page 2, discloses replacing a system after a certain number of minimal repairs have been done).

Therefore, from the teaching of Sheu et al., it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Siegel et al., Katoh and Vinberg combination to include the known concept of replacing at least one component after a certain number of service actions (i.e. repairs) have been done as taught by Sheu et al. in order to aid in reducing the cost associated with running and maintaining the system.

As per Claim 4, the Siegel, Katoh, Vinberg and Sheu combination discloses the claimed invention as applied to Claim 3, above. However, the combination fails to explicitly disclose the concept of configuring parent-child relationship in association with at least one item utilizing an XML based file.

Vinberg et al. discloses a system and method for monitoring components with the concept of configuring parent-child relationship in association with at least one item utilizing an XML based file (Col. 3, Lines 15-52; Col. 5, Line 65-Col. 6, Line 7, discloses developing a parent-child relationship in association with an item wherein utilizing a file encoded in XML).

Therefore, from the teaching of Vinberg et al., it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Siegel et al., Katoh, Vinberg and Sheu combination to include the well-known concept of configuring parent-child relationship in association with at least one item utilizing an XML based file to yield the predictable result of providing the ability to transmits the data file to a plurality of users having various data structures.

As per Claim 5, the Siegel, Katoh, Vinberg and Sheu combination discloses the claimed invention as applied to Claim 4, above. However, Siegel et al. fails to explicitly disclose creating a name indicative of said parent component before and after a replacement of said parent component.

Katoh discloses a maintenance management system with the concept of creating a name indicative of said parent component before and after a replacement of said parent component (Col. 8, Lines 13-14, discloses providing a name indicative of a

component (i.e. parent component) thus each time a component is added or replaced a new name is given thus this is done both before and after).

Therefore, from the teaching of Katoh, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the a system of Siegel, Katoh, Vinberg and Sheu to include creating a name indicative of said parent component before and after a replacement of said parent component as taught by Katoh in order to aid in monitoring the usage of the components within a device by identifying the components comprised within the device.

As per Claim 6, the Siegel, Katoh, Vinberg and Sheu combination discloses the claimed invention as applied to Claim 5, above. However, Siegel et al. fails to explicitly disclose displaying a representation indicative of a need for said service action of said parent component, if said at least one item exceeds said threshold value.

Katoh discloses a maintenance management system with the concept of displaying a representation indicative of a need for said service action of said parent component, if said at least one item exceeds said threshold value (Col. 2, Lines 51-67, discloses displaying a representation indicative of a need for said service action via the output of an alarm comprising component information when the component (i.e. high frequency service item) is less than or equal to a remainder day reference value).

Therefore, from the teaching of Katoh, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method and system for assessing an end of life in a system of the Siegel, Katoh, Vinberg and Sheu to include displaying a representation indicative of a need for said service action of said

parent component, if said at least one item exceeds said threshold value as taught by Katoh in order to timely inform a maintenance/service person of a need for service regarding a device.

10. **Claims 7-9 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Siegel et al. (6,754,453) hereafter Siegel, in view of Katoh (7,865,090) here after Katoh, further in view of Vinberg et al. (7,797,147) hereafter Vinberg, further in view of Sheu et al. (1996) hereafter Sheu, further in view of Ohashi (7,321,896) hereafter Ohashi**.

As per Claim 7, the Siegel, Katoh, Vinberg and Sheu combination discloses the claimed invention as applied to Claim 6, above. However, the combination fails to explicitly disclose configuring a hierarchical structure to expressing via said hierarchical structure a relationship and a servicing function associated with said at least one item utilizing a related component indicator and a counter.

Ohashi discloses a component management system with the concept of configuring a hierarchical structure to expressing via said hierarchical structure a relationship and a servicing function associated with said at least one item utilizing a related component indicator and a counter (Fig. 2, discloses the development of an hierarchical structure that express the relation between a plurality of components. Examiner asserts that the hierarchical structure is used to express a relationship and a servicing function associated with said at least one item holds little, if any, patentable

weight. The intended purpose/use of the hierarchical structure fails to explicitly or implicitly alter the method steps of configuring a hierarchical structure.).

Therefore, from the teaching of Ohashi, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Siegel et al. and Katoh combination to include the concept of configuring a hierarchical structure as taught by Ohashi in order to provide the relationship between the different components comprised within an item.

As per Claim 8, Siegel et al. discloses wherein said service action comprises at least one of the following types of actions: a rebuild action, a repair action, a cleaning action, or a calibrate action (Col. 1, Lines 24-50, discloses the service action being a replace action Col. 2, lines 7-24, shows that the action can also be repairing of the parts based on the threshold values).

As per Claim 9, the Siegel, Katoh, Vinberg, Sheu and Ohashi combination discloses the claimed invention as applied to Claim 8, above.

Examiner asserts that the data identifying the components ad "customer replaceable and service engineer serviceable" are considered to be labels for the components and adds little, if anything, to the claimed acts or steps and thus does not serve to distinguish over the prior art. Any differences related merely to the meaning and information conveyed through labels (i.e., the type of component) which does not explicitly alter or impact the steps of the method does not patentably distinguish the claimed invention from the prior art in terms of patentability.

11. **Claims 10-12 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Siegel et al. (6,754,453) hereafter Siegel, in view of Katoh (7,865,090) here after Katoh, further in view of Vinberg et al. (7,797,147) hereafter Vinberg, further in view of Sheu et al. (1996) hereafter Sheu, further in view of Ohashi (7,321,896) hereafter Ohashi, in further view of Official Notice**.

As per Claim 10, the Siegel, Katoh, Vinberg, Sheu and Ohashi combination discloses the concept of replacing a parent component. However, the combination fails to explicitly disclose the concept of rebuilding a parent component.

Examiner takes Official Notice that it is old and well known in the art the rebuild a component. For example, people choose to rebuild a car engine rather than purchase a new car engine when needed. Nagata (US 2004/0034566) discloses the concept of rebuilding car components. Morti (US 2005/0015181) discloses the concept of rebuilding car components.

Therefore, it would have been obvious to one of ordinary skill in the art to modify the Siegel et al. and Katoh combination to include the concept of rebuilding a parent component in order to reduce waste and energy consumption and the cost of repair.

As per Claim 11, the Siegel, Katoh, Vinberg, Sheu and Ohashi combination discloses the claimed invention as applied to Claim 4, above.

Katoh discloses a maintenance management system with changing said service relationship between said at least one high frequency service item (Col. 8, Lines 13-14, discloses providing a name indicative of a component (i.e. parent component) thus each time a component is added or replaced a new name is given thus this is done both

before and after. Thus changing the relationship as different names for the parts which are replaced).

However, the combination fails to explicitly disclose the concept of changing said service relationship between said at least one high frequency service item by updating a file via a user (i.e. remote service provider).

Examiner takes Official Notice that it is old and well known in the art for a user to update information contained in a file. For example, Hilbert et al. (US 2005/0192966) and Manzano (US 2010/0005138) discloses the concept of a remote user updating a file.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Siegel, Katoh, Vinberg, Sheu and Ohashi combination to include the concept of updating a file via a user in order to maintain an up-to-date of the parent-child relationship and the services performed on the components.

As per Claim 12, Siegel et al. discloses associating said at least one service count with a particular name of an assembly thereof (Col. 1, Lines 24-50; Col. 3, Line 59-Col. 4, Line 56, discloses the concept of associating a count with a particular replaceable element being monitored, wherein the replaceable element has a particular name such as a photoreceptor); and

replacing a name of said another assembly with a different name (Col. 1, Lines 24-50, discloses replacing the replaceable element with another replaceable element. Examiner asserts that the other assembly has a different name fails too explicitly or

implicitly alter the method step of replacing an assembly. The method step of replacing an assembly would be performed the same regardless of the name of the replacement assembly. Therefore, the fact that the replacement assembly has a different name fails to be distinguishable over the prior art.).

Katoh teaches that each component has its own name in the maintenance plan and that it has its own alarm limits which are monitored tracked and used to replace the components when necessary (Col. 16, lines 35-63).

12. **Claim 13 is rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Siegel et al. (6,754,453) hereafter Siegel, in view of Katoh (7,865,090) here after Katoh, further in view of Vinberg et al. (7,797,147) hereafter Vinberg, further in view of Sheu et al. (1996) hereafter Sheu, further in view of Ohashi (7,321,896) hereafter Ohashi, in further view of Official Notice, in further view of Whittaker (WO 2009/070347 A1) hereafter Whittaker**.

As per Claim 13, the Siegel, Katoh, Vinberg, Sheu, Ohashi and Official Notice combination discloses the concept of having a counter associated with an item wherein the count reaches a predetermined value (the life of the part) the item is replaced. However, the combination fails to disclose the concept of storing the count in an RFID tag on an assembly.

Whittaker discloses a system and method for condition-based maintenance of mechanical systems with the concept of storing the count in an RFID tag on an

assembly (Abstract; [0022] discloses the concept of strong service life information in an RFID tag that is attached to an item).

Therefore, from the teaching of Whittaker, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Siegel, Katoh, Vinberg, Sheu, Ohashi and Official Notice combination to include the concept of storing the count in an RFID tag on an assembly as taught by Whittaker in order to monitor the life expenditure of a device in order to prevent premature retirement of a component or system and the predict the time of failure.

13. **Claim 14 is rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Siegel et al. (6,754,453) hereafter Siegel, in view of Katoh (7,865,090) here after Katoh, further in view of Vinberg et al. (7,797,147) hereafter Vinberg, further in view of Sheu et al. (1996) hereafter Sheu, further in view of Ohashi (7,321,896) hereafter Ohashi, in further view of Official Notice, in further view of Whittaker (WO 2009/070347 A1) hereafter Whittaker, in further view of Sawada (6,141,507) hereafter Sawada**.

As per Claim 14, the Siegel, Katoh, Vinberg, Sheu, Ohashi and Official Notice combination fails to explicitly disclose the concept of storing at least one count and said particular name in a memory associated with a rendering device.

Sawada discloses a service system for managing image forming apparatuses for promoting rapid and adequate maintenance or repair with the concept of storing at least one count and said particular name in a memory associated with a rendering device

(Col. 10, Line 50-Col. 11, Line 18, discloses a counter associated with a part wherein a count and the name of the part are stored in the information storage).

Therefore, from the teaching of Sawada, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Siegel, Katoh, Vinberg, Sheu, Ohashi and Official Notice combination to include the concept of storing at least one count and said particular name in a memory associated with a device as taught by Sawada in order to maintain a record of the components in need of repair and replacement.

14. **Claims 15-16 and 20 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Siegel et al. (6,754,453) hereafter Siegel, in view of Katoh (7,865,090) here after Katoh**.

As per Claim 15, Siegel et al. discloses a system for managing high frequency service items associated with a rendering device, said system comprising: a processor, a data bus coupled to the processor; and a computer-usable medium coupled to the data bus (Col. 1, Line 24-Col. 2, Line 57; Col. 6, Lines 51-63, via a document processing system being programmed to monitor the cycle counts and measure the wear to a replaceable element, wherein the document processing system have computer, fax, local area network, and Internet connection capability), the computer program code comprising instructions executable by the processor and configured for:

a rendering device (Col. 2, Line 65-Col. 3, Line 4, discloses high frequency service items (i.e. parent components) having parts (i.e. child components) comprised within a document processing system (i.e. a device));

at least one high frequency service items that is associated with and a component of said rendering device comprising a parent component associated with said rendering device and at least one child component (Col. 2, Line 65-Col. 3, Line 4, discloses high frequency service items (i.e. parent components) having parts (i.e. child components) comprised within a document processing system (i.e. a device));

associated with said rendering device and at least one child component comprising at least one sub-part of said parent component wherein only said parent component is customer replaceable (Col. 2, Line 65-Col. 3, Line 4, discloses high frequency service items (i.e. parent components) having parts (i.e. child components) comprised within a document processing system (i.e. a device), the fact that the child component is not customer replaceable does not change or alert steps in anyway as it does not describe the steps but rather the title of person performing them. Further this does not change the structure as it does not change how the components are made or how they function, please see MPEP 2111.05, specifically as stated "**the court noted that** a "'**whereby clause in a method claim is not given weight when it simply expresses the intended result of a process step positively recited.**'" ***Id.*** **(quoting *Minton v. Nat'l Ass'n of Securities Dealers, Inc.*, 336 F.3d 1373, 1381, 67 USPQ2d 1614, 1620 (Fed. Cir. 2003)).**" In this case the positively recited step is configuring and the title given to the person who performs this step does change the step itself, but is

merely directed toward a particular user performing an action outside the scope of the claim);

monitoring a status of said at least one high frequency service item with respect to a threshold value replacing said parent component if said at least one child component associated with said high frequency service items exceeds said threshold value for said service action (Col. 1, Lines 24-50, discloses the concept of monitoring high frequency service items with respect to a predetermined value (i.e. threshold value) wherein when a high frequency service item part (i.e. child component) reaches a predetermined value, service on the part is needed. Col. 1, Lines 24-50, discloses replacing a high frequency service item part); and

performing a service action to said at least one child component associated with said parent component on replacement of said parent component in order to retain life of said parent component, thereby maximizing a utilization of said at least one high frequency service item and a reliability with respect to said device (Col. 1, Lines 24-50, discloses replacing a high frequency service item part. Col. 2, lines 7-24, shows that the action can also be repairing of the parts based on the threshold values).

However, Siegel et al. fails to explicitly disclose configuring a parent/child relationship in association with at least one item.

Katoh discloses a maintenance management system with the concept of configuring a parent/child relationship is association with at least one item (Col. 11, Line 64-Col. 12, Line 3; Col. 15, Lines 9-23, discloses the concept of identifying parent-child relationships of components in association with an item).

Katoh further teaches replacing items based on threshold, creating a maintenance plan with an individual component identifier with its own plan and replacing the component when the threshold is achieved (Col. 16, lines 35-63; teaches tracking each component and naming each component with an individual component identifier and replacing the component when the threshold or alarm limit is reached).

Therefore, from the teaching of Katoh, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method and system for assessing an end of life in a system of Siegel et al. to include configuring a parent/child relationship in association with at least one item as taught by Katoh in order to manage the service needs regarding an item wherein one component may affect the service quality of another component based on their relationship.

As per Claim 16, Siegel et al. discloses the concept service counts being associated with components of s document processing system wherein a high frequency service item counter is reset to zero when the part is replaces (via Col. 1, Lines 24-50). Katoh discloses the concept of performing a service action on a parent component wherein the child components are also replaced as a result (via Col. 16, Line 64-Col. 17, Line 16).

However, the Siegel et al. and Katoh combination fails to explicitly disclose the service count associated with a child component to follow a count associated with the parent component upon replacement of parent component after performing a service action.

Examiner asserts it would have been obvious to one of ordinary skill in the art at the time the invention was made to have the counter for the parts of the high frequency service item as disclosed in Siegel et al. be reset when the high frequency item (i.e. parent component) itself is replaced since all the parts (i.e. child components) are being replaced as a result of the high frequency item being replaced in order to adequately monitor the useful life remaining for all the components.

As per Claim 20, Siegel et al. discloses a non-transitory computer-usable medium for managing high frequency service items associated with a rendering device, said computer-usable medium embodying computer program code (Col. 1, Line 24-Col. 2, Line 57; Col. 6, Lines 51-63, via a document processing system being programmed to monitor the cycle counts and measure the wear to a replaceable element, wherein the document processing system have computer, fax, local area network, and Internet connection capability), said computer program code comprising computer executable instructions configured for:

at least one high frequency service items that is associated with and a component of said rendering device comprising a parent component and at least one child component (Col. 2, Line 65-Col. 3, Line 4, discloses high frequency service items (i.e. parent components) having parts (i.e. child components) comprised within a document processing system (i.e. a device));

associated with said rendering device and at least one child component comprising at least one sub-part of said parent component wherein only said parent component is customer replaceable (Col. 2, Line 65-Col. 3, Line 4, discloses high

frequency service items (i.e. parent components) having parts (i.e. child components) comprised within a document processing system (i.e. a device), the fact that the child component is not customer replaceable does not change or alert steps in anyway as it does not describe the steps but rather the title of person performing them. Further this does not change the structure as it does not change how the components are made or how they function, please see MPEP 2111.05, specifically as stated **"the court noted that a "'whereby clause in a method claim is not given weight when it simply expresses the intended result of a process step positively recited.'" *Id.* (quoting *Minton v. Nat'l Ass'n of Securities Dealers, Inc.*, 336 F.3d 1373, 1381, 67 USPQ2d 1614, 1620 (Fed. Cir. 2003))."** In this case the positively recited step is configuring and the title given to the person who performs this step does change the step itself, but is merely directed toward a particular user performing an action outside the scope of the claim);

monitoring a status of said at least one high frequency service item with respect to a threshold value replacing said parent component if said at least one child component associated with said high frequency service items exceeds said threshold value for said service action (Col. 1, Lines 24-50, discloses the concept of monitoring high frequency service items with respect to a predetermined value (i.e. threshold value) wherein when a high frequency service item part (i.e. child component) reaches a predetermined value, service on the part is needed. Col. 1, Lines 24-50, discloses replacing a high frequency service item part); and

performing a service action to said at least one child component associated with said parent component on replacement of said parent component in order to retain life of said parent component, thereby maximizing a utilization of said at least one high frequency service item and a reliability with respect to said device (Col. 1, Lines 24-50, discloses replacing a high frequency service item part. Col. 2, lines 7-24, shows that the action can also be repairing of the parts based on the threshold values).

However, Siegel et al. fails to explicitly disclose configuring a parent/child relationship in association with at least one item.

Katoh discloses a maintenance management system with the concept of configuring a parent/child relationship is association with at least one item (Col. 11, Line 64-Col. 12, Line 3; Col. 15, Lines 9-23, discloses the concept of identifying parent-child relationships of components in association with an item).

Katoh further teaches replacing items based on threshold, creating a maintenance plan with an individual component identifier with its own plan and replacing the component when the threshold is achieved (Col. 16, lines 35-63; teaches tracking each component and naming each component with an individual component identifier and replacing the component when the threshold or alarm limit is reached).

Therefore, from the teaching of Katoh, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method and system for assessing an end of life in a system of Siegel et al. to include configuring a parent/child relationship in association with at least one item as taught by Katoh in order

to manage the service needs regarding an item wherein one component may affect the service quality of another component based on their relationship.

15. **Claim 17 is rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Siegel et al. (6,754,453) in view of Katoh (7,865,090) and in further view of Sheu et al. (1996)**.

As per Claim 17, the Siegel et al. and Katoh discloses the concept of resetting counter corresponding to a component after a service action has been performed on the component. However, the Siegel et al. and Katoh combination fails to explicitly disclose the concept of replacing at least one component after a certain number of service actions (i.e. repairs) have been done.

Sheu et al. discloses the concept of determining a replacement policy for a system with the concept of replacing at least one component after a certain number of service actions (i.e. repairs) have been done (Page 2, discloses replacing a system after a certain number of minimal repairs have been done).

Therefore, from the teaching of Sheu et al., it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Siegel et al. and Katoh combination to include the known concept of replacing at least one component after a certain number of service actions (i.e. repairs) have been done as taught by Sheu et al. in order to aid in reducing the cost associated with running and maintaining the system.

16. **Claim 18 is rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Siegel et al. (6,754,453) in view of Katoh (7,865,090) and in further view of Sheu et al. (1996), in further view of Vinberg et al. (7,797,147).**

As per Claim 18, the Siegel et al., Katoh and Sheu combination discloses the claimed invention as applied to Claim 17, above. However, the combination fails to explicitly disclose the concept of configuring parent-child relationship in association with at least one item utilizing an XML based file.

Vinberg et al. discloses a system and method for monitoring components with the concept of configuring parent-child relationship in association with at least one item utilizing an XML based file (Col. 3, Lines 15-52; Col. 5, Line 65-Col. 6, Line 7, discloses developing a parent-child relationship in association with an item wherein utilizing a file encoded in XML).

Therefore, from the teaching of Vinberg et al., it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Siegel et al., Katoh and Sheu combination to include the well-known concept of configuring parent-child relationship in association with at least one item utilizing an XML based file to yield the predictable result of providing the ability to transmits the data file to a plurality of users having various data structures.

17. **Claim 19 is rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Siegel et al. (6,754,453) in view of Katoh (7,865,090) and in further view of**

Sheu et al. (1996), in further view of Vinberg et al. (7,797,147), in further view of Ohashi (7,321,896).

As per Claim 19, the Siegel et al., Katoh, Sheu and Vinberg combination discloses the claimed invention as applied to Claim 18, above. However, the combination fails to explicitly disclose configuring a hierarchical structure to expressing via said hierarchical structure a relationship and a servicing function associated with said at least one item utilizing a related component indicator and a counter.

Ohashi discloses a component management system with the concept of configuring a hierarchical structure to expressing via said hierarchical structure a relationship and a servicing function associated with said at least one item utilizing a related component indicator and a counter (Fig. 2, discloses the development of an hierarchical structure that express the relation between a plurality of components. Examiner asserts that the hierarchical structure is used to express a relationship and a servicing function associated with said at least one item holds little, if any, patentable weight. The intended purpose/use of the hierarchical structure fails to explicitly or implicitly alter the method steps of configuring a hierarchical structure.).

Therefore, from the teaching of Ohashi, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Siegel et al., Katoh, Sheu and Vinberg combination to include the concept of configuring a hierarchical structure as taught by Ohashi in order to provide the relationship between the different components comprised within an item.

Response to Arguments

18. Applicant's arguments filed October 19, 2015 have been fully considered but they are not persuasive.

19. In response to the applicant's arguments on pages 8-10, specifically that "The Office Action never the less rejects the claims asserting that they are directed to an abstract idea. The Applicant respectfully disagrees that the claims recite an abstract idea. The claims describe the use of a computer to monitor the status of rendering device hardware. This is not, for example, a fundamental economic practice, a method of organizing human activity, or an algorithm. The claimed features could not be practiced by a human alone, and do not attempt to preempt any particular human activity by applying an otherwise known method using a computer. Instead, the hardware elements of a rendering device are categorized and monitored using computer hardware and software. That monitoring is then used to alert a user to the need to replace a high frequency service item."

"Further, even assuming that the claims are directed to an abstract idea (they are not, and the Applicant explicitly is presenting this explanation only as a hypothetical example) they still provide significantly more than the alleged abstract idea itself. For example, the claims are specifically directed to means for replacing HFSI in a rendering device. It is noteworthy that the claims recite both a computer and rendering device separately. Thus, to the extent the claims do require a computer, the use of such components is explicitly for the improvement of another technology (rendering devices). Likewise, the claims provide improvement to the rendering device itself."

"Put another way, the claims do not describe methods or systems intended to monopolize all "managing of service items" (the alleged abstract idea as presented in the Office Action) using a computer. Instead, the claims specifically describe method steps and systems associated with improving the service of a rendering machine, in a way that could not equivalently be performed without a computer. The fact that the computer is necessary in accomplishing the claimed steps is indicative of the fact that the computer improves the rendering device technology which is also explicitly included in the claims."

"Therefore, the Applicant submits that claims 1-20 are directed to statutory subject matter in accordance with 35 U.S.C. §101. Based on the foregoing, the Applicant respectfully requests that the 35 U.S.C. §101 rejections of claims 1-20 be withdrawn."

The Examiner respectfully disagrees.

As previously stated in the prior Office Action, as stated above under *Alice Corporation Pty. Ltd. v. CLS Bank International, et al.*, 573 U.S. (2014), it is not enough to merely recite a particular machine as the claims continue to be drawn to an abstract idea. **Claims 1 – 20** are rejected under 35 U.S.C. 101 because the claimed invention is directed to a non-statutory subject matter. **Claims 1 – 20** do not fall within at least one of the four categories of patent eligible subject matter because the claimed invention is directed to a judicial exception (i.e., a law of nature, a natural phenomenon, or an abstract idea) without significantly more. **Claims 1 – 20** are directed to an abstract idea of managing the service of items, specifically, directed towards configure the

relationship between items, monitoring the status of the items, replacing the items exceeding a threshold value, and performing a service action, which is (i) a fundamental economic practice, (ii) a method of organizing human activities, (iii) an idea of itself, or (iv) a mathematical relationship or formula. For instance, in *Alice Corp.* the Supreme Court found that "intermediated settlement" was a fundamental economic practice, which is an abstract idea.

Part I: Is the claim **directed** to a law of nature, a natural phenomenon, or an abstract idea? As was discussed above, the claimed invention is, indeed, directed to an abstract idea as it is directed towards the abstract idea of project design. The claimed invention is directed towards performing the well-understood, routine, and conventional activities in the technical field of servicing items. Independent **claims 1, 15, and 20** are directed towards the well-understood, routine, and conventional activities of configure relationships, monitoring the status of items, replacing items when necessary and performing service actions such as replacing or repairing an item. As a result, the Examiner asserts that the claimed invention is, indeed, directed towards a judicial exception of an abstract idea and is, therefore, not eligible for the "streamlined analysis".

Although, one may argue that the claimed invention does not seek to "tie up" the exception because of the claimed invention's narrow scope, the Examiner asserts that clever draftsmanship of further narrowing the abstract idea does not change the fact that the invention is still directed towards an abstract idea. As an example, the Examiner asserts that if the claimed invention were directed towards the abstract idea of

incentives by providing a user with a 3 for 1 sale and the state of the art only provides teachings for other sale types, e.g., 2 for 1, BOGO, or etc. and does not mention 3 for 1 sales, then, for purposes of a prior art rejection under 35 USC 102 or 103 there *may* be a distinction. However, for the purposes of 35 USC 101, and in view of the decision of *Alice Corp v CLS Bank*, clever draftsmanship of further narrowing of an abstract idea does not change the fact that the invention is still directed towards an abstract idea, i.e. discounting with a 3 for 1 sale versus a 2 or 1 sale result in the invention still being directed towards discounting, which is an abstract idea. Here, the claimed invention is directed towards a similar scenario because the claimed invention is taking the abstract idea of managing the servicing items and merely implementing it in a particular environment, i.e. the claimed invention takes the information that corresponds to the serviceable items and uses them, or, more specifically, applies them in the aforementioned well-understood, routine, and conventional activities that are known in the technical field of service management. To put it another way, the claimed invention has done nothing more than take the well-understood, routine, and conventional activities of configuring the relationship between items, monitoring the items, replacing the items when necessary, and performing services, i.e. the information that is gathered and modified correspond to the items being managed, and etc. that correspond to the rendering devices. Again, the Examiner would like to reiterate that this is a rejection under 35 USC 101 and not a rejection under 35 USC 102/103. To be more specific, unlike rejections under 35 USC 102 and 103 which are evidenced base, 35 USC 101 is not evidence based but rather is a matter of law and such, no evidence is required.

Therefore, because independent **claims 1, 15, and 20** includes an abstract idea, the claim must be reviewed under Part II of the Alice Corp. analysis to determine whether the abstract idea has been applied in an eligible manner.

Part II: The claim(s) does not include additional element that are sufficient to amount to significantly more than the judicial exception because the claim recited generically computer elements (e.g. a processor, data bus, medium and XML) which do not add a meaningful limitation to the abstract idea because they would be routine in any computer implementation.

The Examiner asserts that the claimed invention does not further or improve upon the technology or the technical field as merely having a general purpose device to perform the steps of the abstract idea is nothing more than having the general purpose device perform the well-understood, routine, and conventional activities already known in project design, which results in the claimed invention not amounting to being significantly more than the judicial exception. The Examiner further notes that the decision of *DDR Holdings* does not apply as, unlike *DDR Holdings*, the claimed invention is not "deeply rooted in the technology" since: 1.) humans have, for some time, longed been known to perform the well-understood, routine, and conventional activities in the field of managing serviceable items, e.g., gathering the necessary information pertaining to the items being managed; and 2.) the well-understood, routine, and conventional activities of the abstract idea does not change, alter, or improve upon how the technology, i.e. the computer system, fundamentally functions. The invention further fails to improve upon the technical field (project design) because merely using

the general purpose device to perform the well-understood, routine, and conventional activities of the project design has been held to not be an "inventive concept" as the general purpose device is being used for the very purpose that such device are known to be used for, e.g. more efficient, faster, and etc.

Additionally, the claimed invention is not directed towards the computer, how it functions, or an improvement to the computer, but directed towards the abstract idea of managing serviceable items by monitoring their use, placing when necessary and performing actions. The Examiner asserts that the concept of data collection, recognition, and storage is undisputedly well-known and, indeed, humans have always performed these functions. As was already discussed above, the claimed invention is merely utilizing general purpose device (computer system) to perform the steps of data retrieval and collection regarding the serviceable items, and, based on the recognized information, store the information so that the item maintenance history can be reviewed for any thresholds and when the item needs to be replaced, it is. Although one may argue that the human mind is unable to process and recognize the electronic stream of data that is being received, transmitted, stored, and etc. by the computer system, the Examiner asserts that this is insufficient to overcoming the rejection under 35 USC 101. The claims in *Alice Corp v CLS Bank* also required a computer that processed streams of data, but nonetheless were found to be abstract. There is no "inventive concept" in the claimed invention's use of a general purpose computer to perform well-understood, routine, and conventional activities commonly used in the technical field of managing serviceable items. At most, the claims attempt to limit the abstract idea of

recognizing and storing information using the devices to a particular environment. Such a limitation has been held insufficient to save a claim in this context.

Finally, the steps of monitoring and tracking information as well as storage of the information are merely directed towards the concept of data gathering and transmitting are considered insignificant extra solution activities. Viewed as a whole, these additional claim elements do not provide meaningful limitations to transform the abstract idea into a patent eligible application of the abstract idea such that the claims amount to significantly more than the abstract idea itself.

The claim(s) does/do not include additional elements that are sufficient to amount to significantly more than the judicial exception because the additional elements or combination of elements in the claims other than the abstract idea per se amounts to no more than: (i) monitoring serviceable items, and/or (ii) recitation of computer readable storage medium having instructions encoded to perform functions of managing the service of items, in this case, when an item needs to be replaced, is well understood, routine, and conventional activities previously known to the industry. Considering all claim elements both individually and in combination, do not amount to significantly more than an abstract idea.

Further while the applicant alleges that this is a transformation however data changing for one description to another or an item being “cleaned” are not considered to be transformations as a different state is considered to be from one state of being to another such as liquid to gas or from liquid to a solid not to a different title. As such this is not considered to be a transformation and as such is not considered to be sufficient to

make the claims statutory under 35 U.S.C. §101. Further lacking any additional arguments from the applicant the rejections have been maintained.

Dependent **claims 2 – 14 and 16-19** merely add further details of the abstract steps/elements recited in **claims 1, 15, and 20** without including an improvement to another technology or technical field, an improvement to the functioning of the computer itself, or meaningful limitations beyond generally linking the use of an abstract idea to a particular technological environment. Therefore, dependent **claims 2 – 14 and 16 – 19** are also non-statutory subject matter.

20. In response to the applicant's arguments on pages 11-18, specifically that, "The Applicant respectfully disagrees with this assessment. The Applicant respectfully notes that claim 1 has been amended as follows:"

[quoting amended claim 1]

"This amendment is intended to illustrate a number of differences between the cited material and the specific features of the claims and is fully supported by the specification (for example at paragraphs [0034], [0036]-[0042], and FIGS. 4 and 5)."

"**This amendment underscores that unlike the cited references, the child component represents a service item that can be potentially replaced but not repaired by the customer. A useful example of this is provided in Applicant's specification as follows**"

"The service items 410 can be replaced after a certain count of instances the **child component is reset (each time the child component is serviced)**. For example, in some situations the wire assembly can be replaced every third time the

wires are cleaned. The counter associated with: the wire assembly represents the number of times the child component is reset (each time the wire is cleaned). A service count associated with the child component can be configured to follow a count associated with the parent components 415 and 420 on replacement of the parent components 415 and 420 into the rendering device 108."

"It is further noteworthy that Applicant's claims require that the parent is replaced when the count of services on the child exceeds the claimed threshold."

"By contrast, the combined teaching of Siegel, Katoh, and Vinberg does not describe a similar relationship between the **parent and child components, or that service on the child determines the replacement of the parent as claimed**. For example, the Katoh reference specifically requires that:"

"When another component recorded as a PM target in the PM plan data 240 is registered as a child component ("Yes" in step $3-3), the control unit 21 of the maintenance management server 20 executes a deleting process for deleting this child component (step S3-4). Accordingly, when a parent component is replaced, it is not necessary to replace a child component included in this parent component, and therefore, it is possible to prevent unnecessary components from being ordered. (emphasis. added)."

"In other words, the Katoh reference envisions only the scenario where the parent item is replaced and allows for the deletion of the child component as a result. This does not teach or suggest the notion that the child component service governs the need to replace the parent as claimed."

"The Applicant further disagrees with the argument in the Office Action that "Col. 2, Lines 51-67, discloses an image forming apparatus (i.e. parent component) having an alarm output unit (i.e. child component) that displays an indication that a component has exceed the remainder day reference value (i.e. threshold value))." **In particular, the Applicant respectfully disagrees that the image forming apparatus is analogous to the claimed parent component or that the alarm output unit is analogous to the claimed child component. The Applicant notes that the claims have been amended to underscore this point**. Additionally, the reference itself specifically claims "a component relationship information storage unit configured to store, for components included in the image forming apparatus, component identifiers of parent components including child components..." Thus, even according to the reference, the stated interpretation of the image forming apparatus as the "parent component" and the alarm output unit as a "child component" is incorrect. Indeed, the Applicant's claimed parent component is a high frequency service item; it is clear that the referenced image forming apparatus is not."

"**The Applicant further disagrees that the Vinberg reference teaches or suggests an XML based computer system as claimed**. The material cited in Vinberg states "...the SDH may be stored in a file or set of multiple files, the files being encoded in XML..." The Applicant respectfully asserts that a single sentence regarding encoding flies as XML is not sufficient to teach or suggest a computer system that is based in XML as claimed. The Applicant respectfully asserts that beyond the fact that the Vinberg reference includes the acronym "XML" there is nothing about the reference that

teaches or suggests the specific feature of an XML based computer system as claimed."

"The Applicant respectfully disagrees that the combination of the Vinberg with the remaining references would be obvious to one skilled in the art. The Office Action suggests the obviousness is borne in "providing the ability to transmit the data file to a plurality of users." However, there is nothing in the material cited that suggests any need to transmit the data file to a plurality of users. Indeed, the Katoh reference makes no mention of "a plurality of users" and the Siegel reference describes system modeling techniques for identifying wear on components. Given that no support has been provided for the cited motivation a case of prima facie obviousness has not been established, because there is no motivation for the combination of references as proposed."

"Each of the examples provided in Vinberg relate only to a computer. By contrast, the cited material in both Siegel and Katoh describe only an image forming apparatus (unlike the present claims which describe both). Thus, the proposed modification of Siegel/Katoh would require a change in their respective principles of operation visa vie the introduction of an external computer as described in Vinberg. Accordingly, according to MPEP 2143.01, the references in combination are not sufficient to render the claims prima facie obvious."

"According to the arguments and amendment presented above, the Applicant respectfully asserts a case of prima facie obviousness has not been established and respectfully requests the rejection be withdrawn."

The Examiner respectfully disagrees.

It appears that the applicant is arguing the references separate, in response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Specifically as shown in the above rejection Siegel Col. 1, Lines 24-50, discloses replacing a high frequency service item part. Specifically monitoring a status of said at least one high frequency service item with respect to a threshold value replacing said parent component if said at least one child component associated with said high frequency service items exceeds said threshold value (Col. 1, Lines 24-50, discloses the concept of monitoring high frequency service items with respect to a predetermined value (i.e. threshold value) wherein when a high frequency service item part (i.e. child component) reaches a predetermined value, service on the part is needed. Col. 1, Lines 24-50, discloses replacing a high frequency service item part); and performing a service action to said at least one child component associated with said parent component on replacement of said parent component in order to retain life of said parent component, thereby maximizing a utilization of said at least one high frequency service item and a reliability with respect to said device (Col. 1, Lines 24-50, discloses replacing a high frequency service item part). As such Siegel and not Katoh was used to teach this limitation.

Katoh was used to teach a maintenance management system with the concept of configuring a parent/child relationship is association with at least one item (Col. 11, Line 64-Col. 12, Line 3; Col. 15, Lines 9-23, discloses the concept of identifying parent-child relationships of components in association with an item); and providing an indicator for replacing a parent component being displayed upon said child component exceeding said threshold value (Col. 2, Lines 51-67, discloses an image forming apparatus (i.e. parent component) having an alarm output unit (i.e. child component) that displays an indication that a component has exceed the remainder day reference value (i.e. threshold value)) and replacing items based on threshold, creating a maintenance plan with an individual component identifier with its own plan and replacing the component when the threshold is achieved (Col. 16, lines 35-63; teaches tracking each component and naming each component with an individual component identifier and replacing the component when the threshold or alarm limit is reached).

While the applicant argues that the imaging device is not analogous to a rendering device, however the term rendering device is merely a title and does not change how the steps are performed or how the structure is configured but rather provides an environment of use, See MPEP 2111.05. Further while the applicant states they are not analogous the applicant provides no reason or rationale as to why they are not analogous or why the specific environment of use changes how the steps are performed. As such the applicant's statements are not found to be persuasive.

While the applicant states that Vinberg does not teach the XML computing system of the claimed invention, however as shown in the above rejection Vinberg

shows the use of an XML based filing system in a computing environment. specifically Col. 3, Lines 15-52; Col. 5, Line 65-Col. 6, Line 7, discloses developing a parent-child relationship in association with an item wherein utilizing a file encoded in XML. While the applicant argues that Vinberg does not state multiple computers or the same environment this is not correct. As shown in Col. 5, lines 32-38 it shows service level agreements between multiple parties, thus it does provide a common format to a plurality of users. Col. 5, Line 65-Col. 6, Line 7 of Vinberg shows using one format or another would have been obvious, this includes XML. As such Vinberg is not limited a single computer and does provide more than a mere acronym as it describes the format in which files are stored and also describes how different. Therefore it does change the principle operation as alleged by the applicant rather it teaches how it is known to use one format or another as it would have been obvious to do so. Thus the Examiner is not persuaded by the applicant's arguments toward the combination.

As such the Examiner asserts that when combined the references reads over the claims as currently written and the rejections have been maintained.

21. In response to the applicant's argument on pages 18-19, specifically that "Katoh discloses the **concept of performing a service action on a parent component wherein the child components are also replaced as a result** (via Col. 16, Line 64-Co1.17, Line 16)."

"However, the Office Action admitted the Siegel et al. and Katoh combination fails to explicitly disclose the service count associated with a child component to follow a count associated with the parent component upon replacement of parent component

after performing a service action. The Examiner asserted it would have been obvious to one of ordinary skill in the art at the time the invention was made to have the counter for the parts of the high frequency service item as disclosed in Siegel et al. be reset when the high frequency item (i.e. parent component) itself is replaced since all the parts (i.e. child components) are being replaced as a result of the high frequency item being replaced in order to adequately monitor the useful life remaining for all the components."

"The Applicant respectfully asserts that the argument presented with respect to claim 2 do not address the specific features of the claims. As such, a case of prima facie obviousness has not been established with respect to claim 2."

"For example, the reference asserts that siegel discloses counting and resetting an HFSI and that Katoh describes that the replacement of a parent component necessarily includes replacement of the child components. However, Applicant's claim requires:"

"1) a count ***associated*** with the child component Neither of the cited references make any description of a count related to a child component in any capacity. Indeed, the Katoh reference teaches away from such a count in favor of the position that child components are replaced when the parent is replaced anyway. 2) following a parent component count with a child component count. No citation provided addresses this idea in any capacity. 3) the conservation of counts upon replacement of a parent component. No citation provided addresses this idea in any capacity"

"The Applicant respectfully asserts that the cited material fails to teach or suggest each and every claim feature as required to establish prima facie obviousness and therefore requests the rejection be withdrawn."

The Examiner respectfully disagrees.

As stated in the rejection each time a high frequency item is replaced it is reset and thus the counter with the items contained therein are reset as well. The claim as currently written does not state or require that the counter for the child component is independent but rather the service count is associated with the child component. Thus since each parent has a child and each parent has a counter the counter is associated with the child. Thus when combined the references read over the claims as currently written and therefore the rejections have been maintained.

22. In response to the applicant's arguments on pages 20-21, specifically "The Applicant respectfully notes that claim 5 has been amended to clarify that the HFSI parent component is given a name before it is replaced and then that name is altered after replacement of the component as described in Applicant's specification at paragraph [0040]."

"The Applicant respectfully asserts that the material cited in the prior art does not teach or suggest the alteration of the name of the component. Indeed, the cited material only suggests that data can be indentified."

"According to the amendment of claim 5, the Applicant respectfully asserts that a case of prima facie obviousness has not been established and respectfully requests the rejection be withdrawn."

The Examiner respectfully disagrees.

As currently written the claim merely requires creating a name before and after replacement, it does not altering an existing name. As shown in Katoh Col. 8, Lines 13-14, discloses providing a name indicative of a component (i.e. parent component) thus each time a component is added or replaced a new name is given thus this is done both before and after. As such the Examiner has not been persuaded and as such the rejections have been maintained.

23. In response to the applicant's arguments on pages 21-22, specifically that, "The Applicant respectfully asserts the claim has been amended to remove the "replace action." As such, the Applicant respectfully asserts a case of prima facie boviouness has not been established with respect to claim 8 and respectfully requests the rejection be withdrawn".

The Examiner respectfully disagrees.

As shown above in the rejection the Examiner has provided additional citations to cover the remaining option of repairing. As such the Examiner asserts that the reference reads over the claims as currently written and as such the rejections have been maintained.

24. In response to the applicant's arguments on page 22, specifically that, "The Applicant respectfully disagrees with this assessment. The Applicant respectfully asserts that the alleged "labels" further describe components and therefore serve to define the scope of the claims. The Applicant respectfully asserts that each of these "labels" are not labels so much as features of the invention. The Applicant is unaware of

any rule or case suggesting that the "meaning and information" conveyed via such descriptive terms do not deserve patentable consideration."

"The Applicant respectfully notes that in order to establish prima facie obviousness each and every claimed feature must be indentified in the cited prior art references. Here, no citation has been provided which teaches OF suggests that a child component comprises a service engineer serviceable component. Accordingly, the Applicant respectfully asserts a case of prima facie obviousness has not been established and the claim should be moved to allowance."

The Examiner respectfully disagrees.

As described above the limitations remain to be directed merely descriptive material, as stated the "labels" are used to "describe components". As stated in MPEP 2111.05, descriptive material which does not serve to change the structure of the system or change how the steps of the method are perform do not serve to distinguish the claims from the prior art as they are considered non-functional descriptive material. As such the Examiner has not been persuaded and the rejections have been maintained.

25. In response to the applicant's arguments on pages 22-24, specifically that "The Applicant respectfully disagrees with this assessment and submits that without a name change, the component cannot be tracked for later replacement or for usage. If the same name was utilized each time, it would be impossible to keep up with which components have been replaced, which are new and which have been rebuilt. This name change limitation is therefore patentably distinguishable over the prior art."

"In order to address the specific argument presented in the Office Action, the Applicant respectfully notes that the claim has been amended to include a specific method step directed to replacing the name of the second assembly"

"Siegel in view of Katoh therefore fails in the aforementioned prima facie obviousness test as each and every limitation of the Applicant's claims is not disclosed, Based on the foregoing, the Applicant respectfully requests that the rejection be withdrawn,"

The Examiner respectfully disagrees.

As stated above and in the rejection the step of assigning a different name does not change or alter the step of replacing, rather it merely shows that when an item is replaced it has a different name. As discussed above with regards to claim 5, Katoh Col. 8, Lines 13-14, discloses providing a name indicative of a component (i.e. parent component), thus each time an item is replaced it is provided or assigned a name. Thus when combined the references continue to read over the claims as currently written and as such the rejections have been maintained.

26. In response to the applicant's arguments on pages 24-25, specifically that "The Applicant respectfully disagrees with this assessment. The Applicant respectfully notes that, even with the alleged disclosure of Sheu, the combined prior art still fails to teach or suggest that the count of instances related to the child component is adjusted. Indeed, the Applicant reiterates that according to Katoh (the only reference: which discusses a child), there is no need to track the child because it is simply deleted when the parent is replaced."

"As such, the Applicant respectfully asserts that the combination of Sheu with the Katoh/Siegel combination would require a change in the principle of operation of Katoh. Accordingly, the combination of such references is insufficient to establish prima facie obviousness. The Applicant respectfully requests the rejection be withdrawn."

The Examiner respectfully disagrees.

As stated in the rejection each time a high frequency item is replaced it is reset and thus the counter with the items contained therein are reset as well. The claim as currently written does not state or require that the counter for the child component is independent but rather the service count is associated with the child component. Thus since each parent has a child and each parent has a counter the counter is associated with the child. Thus when combined the references read over the claims as currently written and therefore the rejections have been maintained.

27. In response to the applicant's arguments on pages 25-27, specifically that "The Applicant respectfully disagrees with this assessment. The Applicant respectfully notes that claim 7 has been amended to explicitly limit the scope of the claims to the expression of the relationship and servicing function. The Applicant respectfully notes that none of the cited prior art teaches or suggests the claimed features."

"Further, the Applicant respectfully asserts that the Ohashi reference is directed to methods and systems for organizing products (such as printed circuit boards) during production. Nothing about this reference relates to the methods and systems described in the remaining cited prior art references or the technology described in Applicant's claims. Aside from the fact that the description of reference FIG. 2 includes the word

"hierarchy" there is nothing about the Ohashi reference that is applicable to claim 7 in any capacity. The Applicant notes that According to the MPEP:"

"It is clear that the Ohashi reference has been selected only because it includes the word "hierarchy." The whole of the Ohashi reference has not been considered as it is completely unrelated to the claimed art in any capacity."

"Accordingly, the Applicant respectfully asserts that the claimed features are not taught or suggested in the cited prior art, and the combination of prior art references as proposed would not be obvious. The Applicant respectfully requests the rejection of claim 3 be withdrawn."

The Examiner respectfully disagrees.

The references show a hierarchy in that it includes components and sub components which are called parent components and child components. As stated in the rejection Ohashi discloses a component management system with the concept of configuring a hierarchical structure to express a relationship and a servicing function associated with said at least one item utilizing a related component indicator and a counter, specifically Fig. 2, discloses the development of an hierarchical structure that express the relation between a plurality of components. Examiner asserts that the hierarchical structure is used to express a relationship and a servicing function associated with said at least one item holds little, if any, patentable weight. The intended purpose/use of the hierarchical structure fails to explicitly or implicitly alter the method steps of configuring a hierarchical structure. As such it is obvious that it is known to express the relation between the plurality components in a hierarchy as

depicted in Ohashi. As stated the environment in which this is used does not change or alter the steps or the structure but rather shows it was known in the art of tracking components to configure the components in this manner.

KSR forecloses appellant's argument that a specific teaching is required for a finding of obviousness. KSR, 127 S.Ct. at 1741, 82 USPQ2d at 1396. The above claims recite combinations which only unite old elements with no change in their respective functions and which yield predictable results. Thus, the claimed subject matter likely would have been obvious under KSR. In addition, neither applicant's specification nor applicant's arguments present any evidence that modifying the references where appropriate was uniquely challenging or difficult for one of ordinary skill in the art. Under those circumstances, the Examiner did not err in holding that it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the combination of references. Because this is a case where the improvements are no more than the predictable use of prior art elements according to their established functions, no further analysis is required by the Examiner. KSR, 127 S.Ct. at 1740, 82 USPQ2d at 1396. Lacking any additional arguments the Examiner asserts that the references when combined read over the claims as currently written and as such the rejections have been maintained.

28. In response to the applicant's arguments on pages 27-29, specifically that "The Applicant respectfully disagrees with this assessment. Regarding the above referenced "Official Notice" by the Examiner, Applicant notes **that the Office Action attempts to officially notice legal conclusions**, -namely permitting the rebuilding of a parent

component in order to reduce down time and service cost would have been obvious. Official Notice, however, is only proper for facts. (MPEP § 2144.03). Indeed, Official Notice is only permissible for those few facts that are of a "notorious character" and that are "capable of instant and unquestionable demonstration". (MPEP ~ 2144.03(A)). It is improper to use Official Notice for conclusions of law."

"Secondly, the Office Action relies on Official Notice as essentially the "principal evidence" upon which the rejection regarding the rebuilding of a parent component given the lack of teaching by all of the other references of Applicant's claim limitations. Official Notice cannot be used in this manner. As Section 2144.03(A) of the #IPEP expressly warns, it is never appropriate to rely solely on Official Notice as the principal evidence upon which a rejection was based. Instead, Official Notice is only appropriate for facts and that serve to "fill in the gaps" in a rejection. (A'IPEP s~ 2.1_44.03(A)). This is why official notice is to be judicially applied. (MPEP § 2144.03). It is unreasonable to conclude that the Office has used Official Notice to "fill in" a gap in this rejection."

"Thirdly, the Office attempts to take Official Notice of matter that is not "capable of instant and unquestionable demonstration", as expressly required by section 2144.03(A) of the MPEP. Indeed, even assuming arguendo that people choosing to rebuild car engines is a fact, this fact would be neither of notorious character nor instantly and unquestionably demonstrable in the context of a rendering device or components thereof as claimed. Moreover, courts have long rejected the notion that official notice can be taken on the state of the art. (See Memorandum to Patent Examining Corps from the Deputy Commissioner for Patent Examining Policy regarding

Procedures for Relying on Facts Which are Not of Record as Common Sense or for Taking Official Notice, n.6, citing In re Eynde, 480 F.2d 1364, 1370, 178 USPQ 470, 474 (CCPA 1973)). Thus, the Office's attempt to officially notice the claimed features via the state of the art for car repair is improper as a matter of law."

"In sum, the Office's attempts at Official Notice are improper and traversed. Consequently, there are evidentiary gaps in the rejection of claim 10 that are fatal to a prima fade case of obviousness. The Applicant respectfully requests the rejection therefore be withdrawn."

The Examiner respectfully disagrees.

The Official Notice provided is not a conclusion of law but rather a statement of what is known in the industry, specifically "that it is old and well known in the art the rebuild a component". The Examiner has also provided references to show that this is in fact known in the industry proving that this is a fact that is "capable of instant and unquestionable demonstration". As far as it being the "principal evidence" this is not the case the principal component of the invention is not rebuilding as alleged by the applicant as this features is only substituting one form of replacement or repair with rebuilding and further the claims merely state it is permitting this to happen. As such this limitation isn't even positively recited as such it is not considered to be a "principal" element and as such the Office Action is not merely trying to "fill in" gaps. While the applicant states that the Official Notice is traversed this is not a proper traversal in that it has at no point stated why this is not a matter of fact and why it would not have been

known to rebuild components. As such the Examiner asserts that the applicant's arguments are not persuasive and therefore the rejections have been maintained.

29. In response to the applicant's argument on page 29, specifically that "Therefore, the Office Action argued it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Siegel et al., Katoh, and Vinberg et al. combination to include the concept of updating a file via a user in order to maintain an up-to-date of the parent-child relationship and the services performed on the components."

"The Applicant respectfully notes that claim 11 has been amended to overcome the present rejection and Official Notice. According to the amendment of claim 11 the Applicant respectfully asserts the Official Notice is moot and respectfully requests the rejection be withdrawn."

The Examiner respectfully disagrees.

As shown in the above rejection Katoh discloses a maintenance management system with changing said service relationship between said at least one high frequency service item. Specifically Col. 8, Lines 13-14, discloses providing a name indicative of a component (i.e. parent component) thus each time a component is added or replaced a new name is given thus this is done both before and after. Thus changing the relationship as different names for the parts which are replaced. As previously stated the Official Notice was taken on that it is old and well known in the art for a user to update information contained in a file. For example, Hilbert et al. (US 2005/0192966) and Manzano (US 2010/0005138) discloses the concept of a remote user updating a

file. As such the Official Notice is not moot as alleged by the applicant but rather has been maintained lacking any additional arguments by the applicant.

30. In response to the applicant's statements regarding claims 4, 6, 13, 14, 15, 16, 17, 18, 19, 20 have been noted by lacking any additional arguments by the applicant have not been found persuasive. A such the rejections have been maintained.

31. All rejections made towards the dependent claims are maintained due to the lack of a reply by the applicant in regards to distinctly and specifically point out the supposed errors in the Examiner's action in the prior Office Action (37 CFR 1.111). The Examiner asserts that the applicant only argues that the dependent claims should be allowable because the independent claims are unobvious and patentable over Siegel in view of Katoh, and, where appropriate, in further view of Sheu, Vinberg, Ohashi and Sawada.

Conclusion

32. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PAUL R. FISHER whose telephone number is (571)270-5097. The examiner can normally be reached on Mon/Fri [8am/4:30pm].

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Janice Mooneyham can be reached on (571) 272-6805. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/PAUL R FISHER/
Primary Examiner, Art Unit 3689
1/26/16

REMARKS

I. Advisory Action

The Advisory Action dated April 27, 2016 indicated that the rejections based on 35 USC 112 have been withdrawn. The remaining rejections have been maintained.

The Applicant respectfully notes that the claims have been amended such that they are now in condition for allowance. The Applicant respectfully requests the remaining rejections therefore be withdrawn.

II. Claim Rejections – 35 USC §101

The Final Office Action and Advisory Action rejected claims 1-20 under 35 U.S.C. §101. The Final Office Action argued the claims are directed to non-statutory subject matter. The Final Office Action argued when considering subject matter eligibility it must be determined whether the claim is directed to one of the four statutory categories of invention, i.e., process, machine, manufacture, or composition of matter. If the claim does fall within one of the statutory categories, it must then be determined whether the claim is directed to a judicial exception (i.e., law of nature, natural phenomenon, and abstract idea), and if so, it must additionally be determined whether the claim is a patent-eligible application of the exception. If an abstract idea is present in the claim, any element or combination of elements in the claim must be sufficient to ensure that the claim amounts to significantly more than the abstract idea itself. The Final Office Action argued examples of abstract ideas include fundamental economic practices; certain methods of organizing human activities; an idea itself; and mathematical relationships/formulas. Alice Corporation Pty. Ltd. v. CLS Bank International, et al, 573 U.S. (2014).

The Final Office Action argued in the instant case, claims 1-14 are directed to a process or method and claims 15-19 are directed to an apparatus or system and claim 20 is a directed toward a medium or product. The Final Office Action argued additionally, the claims are directed towards managing the service of items which is considered to be an abstract idea inasmuch as configuring relationships, monitoring the status of items, replacing items when necessary and performing service actions such as replacing or repairing an item are activities that are considered both fundamental economic or business practices and methods of organizing human activity.

The Final Office Action argued the elements in the instant claims (a processor, data bus, medium and XML), when taken in combination, together do not offer "significantly more" than the abstract idea itself because the claims do not recite an improvement to another technology or technical field, an improvement to the functioning of the computer itself, or provide meaningful limitations beyond generally linking an abstract idea to a particular technological environment. The Final Office Action argued it should be noted the limitations of the current claims are performed by a generically recited processor and the memory and program components contain no more than mere instructions to implement the abstract idea on a computer. The Final Office Action argued the claims require no more than a generic computer to perform generic computer functions that are well-understood, routine and conventional activities previously known to the industry. The Final Office Action argued as such the claims simply describe a problem, announce purely functional steps that purport to solve the problem, and recite standard computer operations to perform some of those steps, which is not "significantly more" than an abstract idea. Therefore, claims 1-20 are directed to non-statutory subject matter.

The Advisory Action argued:

> In view of the applicant's arguments on pages 9-15 regarding the 101 rejections, the applicant's arguments have been previously responded to in

> the prior Office Action dated February 3, 2016. Lacking any additional arguments or comments the Examiner has not been persuaded.

The Applicant respectfully disagrees with this assessment. The Applicant first notes that the previously presented arguments remain valid. Such arguments are incorporated herein by reference in their entirety.

The Applicant further notes the amendments to the claims. The claims have been amended in order to mirror the claims indicated to be allowable in the "July 2015 Update to the Interim Eligibility Guidance: Abstract Idea Example Workshop II."

In particular the independent claims have been amended to describe claim elements in addition to the alleged abstract idea including a rendering device, an XML based computer system, components of a rendering device, High Frequency Service Items, sub-parts of parent components, a memory integrated in the HFSI, a remote service provider, a graphical user interface associated with a rendering device, a high frequency service interval monitor application, and a parent component indicator on the rendering device.

As provided in the noted July 2015 Abstract Idea Example Workshop, the additional elements as a combination address the challenge specifically related to rendering devices, or alerting users when a HFSI needs repair or replacement, with a claimed solution that is necessarily rooted in computer technology. These are meaningful limitations beyond simply applying abstract ideas on the Internet.

The Applicant respectfully asserts that the claims are directed to the categories of patent eligible subject matter in 35 U.S.C. § 101. The claims are not an abstract idea, and do not preempt the building blocks of innovation. Accordingly, the Applicant respectfully requests the rejection be withdrawn.

III. Claim Rejections - 35 USC § 103

Requirements for Prima Facie Obviousness

The obligation of the examiner to go forward and produce reasoning and evidence in support of obviousness is clearly defined at M.P.E.P. §2142:

> "The examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. If the examiner does not produce a *prima facie* case, the applicant is under no obligation to submit evidence of nonobviousness."

The U.S. Supreme Court ruling of April 30, 2007 (*KSR Int'l v. Teleflex Inc.*) states:

> "The TSM test captures a helpful insight: A patent composed of several elements is not proved obvious merely by demonstrating that each element was, independently, known in the prior art. Although common sense directs caution as to a patent application claiming as innovation the combination of two known devices according to their established functions, it can be important to identify a reason that would have prompted a person of ordinary skill in the art to combine the elements as the new invention does."
>
> "To facilitate review, this analysis should be made explicit."

The U.S. Supreme Court ruling states that it is important to identify a *reason* that would have prompted a person to combine the elements and to make that analysis *explicit*. MPEP §2143 sets out the further basic criteria to establish a *prima facie* case of obviousness:

1. a reasonable expectation of success; and

2. the teaching or suggestion of all the claim limitations by the prior art reference (or references when combined).

It follows that in the absence of such a *prima facie* showing of obviousness by the Examiner (assuming there are no objections or other grounds for rejection) and of a *prima facie* showing by the Examiner of a *reason* to combine the references, an applicant is entitled to grant of a patent. Thus, in order to support an obviousness

rejection, the Examiner is obliged to produce evidence compelling a conclusion that the basic criterion has been met.

Siegel in view of Katoh and Vinberg

The Office Action rejected claims 1 and 2 under 35 U.S.C. §103(a) over Siegel (6,754,453) in view of Katoh (7,865,090) and Vinberg (7,797,147).

Regarding claim 1, the Final Office Action argued Siegel et al. discloses a method for managing high frequency service items (Col. 2, Line 65-Co1.3, Line 4, discloses a method for tracking the usage of high frequency service items) associated with a rendering device, said method comprising:

at least one high frequency service items that is associated with and a component of said rendering device comprising a parent component and at least one child component (Col. 2, Line 65-Co1.3, Line 4, discloses high frequency service items (i.e. parent components) having parts (i.e. child components) comprised within a document processing system (i.e. a device));

associated with said rendering device and at least one child component comprising at least one sub-part of said parent component wherein only said parent component is customer replaceable (Col. 2, Line 65-Co1.3, Line 4, discloses high frequency service items (i.e. parent components) having parts (i.e. child components) comprised within a document processing system (i.e. a device), the fact that the child component is not customer replaceable does not change or alert steps in any way as it does not describe the steps but rather the title of person performing them. The Final Office Action argued further this does not change the structure as it does not change how the components are made or how they function, please see MPEP 2111.05, specifically as stated "the court noted that a '"whereby clause in a method claim is not given weight when it simply expresses the intended result of a process step positively recited.'" td. (quoting Minton v. Nat'l Ass'n of Securities Dealers, Inc., 336 F°3d 1373° t38t, 67 USPQ2d 1514, 1620 (Fed. Cir. 2003))." in this case the positively recited step is configuring and the title

given to the person who performs this step does change the step itself, but is merely directed toward a particular user performing an action outside the scope of the claim);

monitoring a status of said at least one high frequency service item with respect to a threshold value, replacing said parent component if said at least one child component associated with said high frequency service items exceeds said threshold value for said service action (Col. 1, Lines 24-50, discloses the concept of monitoring high frequency service items with respect to a predetermined value (i.e. threshold value) wherein when a high frequency service item part (i.e. child component) reaches a predetermined value, service on the part is needed. Col. 1, Lines 24-50, discloses replacing a high frequency service item part); and

performing a service action to said at least one child component associated with said parent component on replacement of said parent component in order to retain life of said parent component, thereby maximizing a utilization of said at least one high frequency service item and a reliability with respect to said device (Col. 1, Lines 24-50, discloses replacing a high frequency service item part, Col. 2, lines 7-24, shows that the action can also be repairing of the parts based on the threshold values).

The Final Office Action argued Siegel et al. fails to explicitly disclose configuring and monitoring a parent/child relationship in association with at least one item utilizing an XML based computer system; and providing an indicator for replacing a parent component being displayed upon said child component exceeding said threshold value.

The Final Office Action argued Katoh teaches a maintenance management system with the concept of configuring a parent/child relationship is association with at least one item (Col. 11, Line 64-Co1.12, Line 3; Col. 15, Lines 9-23, discloses the concept of identifying parent-child relationships of components in association with an item); and providing an indicator for replacing a parent

component being displayed upon said child component exceeding said threshold value (Col. 2, Lines 51-67, discloses an image forming apparatus (i.e. parent component) having an alarm output unit (i.e. child component) that displays an indication that a component has exceed the remainder day reference value (i.e. threshold value)). The Final Office Action argued Katoh further teaches replacing items based on threshold, creating a maintenance plan with an individual component identifier with its own plan and replacing the component when the threshold is achieved (Col. 16, lines 35-63; teaches tracking each component and naming each component with an individual component identifier and replacing the component when the threshold or alarm limit is reached).

The Final Office Action argued therefore, from the teaching of Katoh, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method and system for assessing an end of life in a system of Siegel et al. to include configuring a parent/child relationship in association with at least one item; and providing an indicator for replacing a parent component being displayed upon said child component exceeding said threshold value as taught by Katoh in order to manage the service needs regarding an item wherein one component may affect the service quality of another component based on their relationship.

The Final Office Action argued the combination fails to explicitly state that utilizing an XML based computer system.

The Final Office Action argued Vinberg et al. discloses a system and method for monitoring components with the concept of configuring parent-child relationship in association with at least one item utilizing an XML based file in a XML based computer system (Col. 3, Lines 15-52; Col. 5, Line 65-Co1.6, Line 7, discloses developing a parent-child relationship in association with an item wherein utilizing a file encoded in XML).

The Final Office Action argued therefore, from the teaching of Vinberg et al., it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Siegel et al. and Katoh combination to include the well-known concept of configuring parent-child relationship in association with at least one item utilizing an XML based file to yield the predictable result of providing the ability to transmits the data file to a plurality of users having various data structures.

The Applicant respectfully disagrees with this assessment. The Applicant first notes that the previously presented arguments apply equally to the present rejection and are incorporated herein by reference but are reserved in the interest of brevity.

The Applicant further notes that claim 1 has been amended as follows:

1. (Currently Amended) A method for managing high frequency service items associated with a rendering device, said method comprising:

configuring a parent/child relationship in association with at least one high frequency service item utilizing an XML based computer system, wherein said at least one high frequency service item is associated with and a component of said rendering device, said parent/child relationship comprising a parent component associated with said rendering device and at least one child component comprising at least one sub-part of said parent component wherein said parent component is customer replaceable;

storing a preset number of total images for said at least one high frequency service item, and at least one threshold value associate with said at least one high frequency service item in a memory device integrated in said at least one high frequency service item;

monitoring a status of said at least one high frequency service item with respect to ~~a~~ said at least one threshold value utilizing said XML based computer system with a high frequency service interval monitor integrated in said high frequency service item;

updating said XML based computer system by a remote service provider when said parent/child relationship changes;

displaying a hierarchical structure illustrative of said parent/child relationships in a graphical user interface provided by said high frequency service interval monitor on a display associated with said rendering device;

activating a parent component indicator on said rendering device when said at least one threshold value is reached;

performing a service action on said at least one child component when a service threshold for said child component is exceeded ~~associated with said parent component in order to retain life of said parent component~~; and

replacing said parent component if said at least one child component ~~associated with said high frequency service item~~ exceeds a ~~said~~ threshold value for said service action ~~wherein an indicator for replacing said parent component is displayed upon said child component exceeding said threshold value~~, thereby maximizing a utilization of said at least one high frequency service item and a reliability with respect to said rendering device.

The Applicant respectfully asserts that a number of features of the presently amended claims are not taught or suggested in the presently cited prior art. According to the amendments presented above, the Applicant respectfully asserts a case of prima facie obviousness has not been established and respectfully requests the rejection be withdrawn.

Regarding claim 2, the Office Action argued Siegel et al. discloses the concept service counts being associated with components of a document processing system wherein a high frequency service item counter is reset to zero when the part is replaces (via Col. 1, Lines 24-50). Katoh discloses the concept of performing a service action on a parent component wherein the child components are also replaced as a result (via Col. 16, Line 64-Co1.17, Line 16).

The Final Office Action argued, the Siegel et al. and Katoh combination fails to explicitly disclose the service count associated with a child component to follow a count associated with the parent component upon replacement of parent component after performing a service action.

The Final Office Action argued Examiner asserts it would have been obvious to one of ordinary skill in the art at the time the invention was made to have the counter for the parts of the high frequency service item as disclosed in Siegel et al. be reset when the high frequency item (i.e. parent component) itself is replaced since all the parts (i.e. child components) are being replaced as a result of the high frequency item being replaced in order to adequately monitor the useful life remaining for all the components.

The Applicant respectfully asserts that the argument presented with respect to claim 2 do not address the specific features of the claims. As such, a case of prima facie obviousness has not been established with respect to claim 2.

Applicant's claim requires:

1) "at least one service count associated with said at least one child component..."

Neither of the cited references make any description of a count related to a child component in any capacity. In particular, the citation provided states in its entirety:

> Current day machine architecture allows for the use of HFSI counters, which keep track of the number of copies/ prints that utilize certain key components in a document processing system and, thus, contribute to their wear. There are a number of these counters typically each associated with a particular replaceable element so that they can be reset independently when, for example, a photoreceptor is replaced. Many replaceable parts have such a counter associated with them. They are useful in a service strategy where the individual part is scheduled for replacement when the counter associated with that part reaches a predetermined value(the "life" of the part). The idea is to replace parts just before they fail so as to avoid unnecessary machine down time and loss of productivity. When the part is replaced, the associated HFSI counter is reset to zero. These predetermined values are obtained by examination of a population of the parts in question, determining the mean time between failure, and a judgment on the expected life of the part is made. This judgment targets the replacement of the part just before the average life of the part as measured in "clicks" has transpired. By "clicks" what is meant is the number of iterations of system cycles—usually the number of prints/ copies made in a document processing system for example. The problem here is that this judgment needs to provide a conservative estimate of life so that the part does not fail before the scheduled replacement date which means that a certain measure of useful life is being wasted.

The Applicant respectfully requests clarification of what in this citation teaches or suggests "at least one service count associated with at least one child component" as claimed. The cited material in fact simply describes the fact that HFSI counters exist but fails to teach or suggest anything describing a specific service count associated with a child component. The Katoh reference goes a step

further and actually teaches away from such a count in favor of the position that child components are replaced when the parent is replaced.

The claim goes on to require following a parent component count with a child component count. Given that the combined prior art fails to teach or suggest even the basic idea that a separate counts are kept for child and parent counts it is no surprise that no citation is provided that addresses this idea in any capacity.

The Advisory Action responded to this argument by asserting that the claim does not require the counter for the child component to be independent. However, the claim does require a count associated with the child and a different count associated with the parent. The claim thus includes two counts; one associated with the child component and one with the parent component. As such, the combined prior art must teach or suggest at least two counts. It does not.

The Applicant respectfully asserts that the cited material fails to teach or suggest each and every claim feature as required to establish prima facie obviousness and therefore requests the rejection be withdrawn.

Siegel in view of Katoh, Vinberg, and Sheu

The Office Action rejected claims 3-6 under 35 U.S.C. §103(a) over Siegel (6,754,453) in view of Katoh (7,865,090), Vinberg (7,797,147), and Sheu (7,797,147).

Regarding claim 3, the Final Office Action argued the Siegel et al., Katoh and Vinberg discloses the concept of resetting counter corresponding to a component after a service action has been performed on the component. The Final Office Action argued the Siegel et al. and Katoh combination fails to explicitly disclose the concept of replacing at least one component after a certain number of service actions (i.e. repairs) have been done.

The Final Office Action argued Sheu et al. discloses the concept of determining a replacement policy for a system with the concept of replacing at least one

component after a certain number of service actions (i.e. repairs) have been done (Page 2, discloses replacing a system after a certain number of minimal repairs have been done).

The Final Office Action argued from the teaching of Sheu et al., it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Siegel et al., Katoh and Vinberg combination to include the known concept of replacing at least one component after a certain number of service actions (i.e. repairs) have been done as taught by Sheu et al. in order to aid in reducing the cost associated with running and maintaining the system.

The Applicant respectfully disagrees with this assessment. The Applicant respectfully asserts that the previously presented arguments remain valid and are incorporated herein by reference in their entirety but reserved in the interest of brevity.

The Applicant further notes that the claim has been amended as follows:

> 3. (Currently Amended) The method of claim 2 further comprising configuring said parent/child relationship to replace at least one parent component with a replacement parent component if any of said child components of said parent component exceed said threshold value for service action. ~~component after a certain count of instances a counter associated with said at least one child component is reset based on said service action~~.

According to this amendment, the Applicant respectfully asserts that the combined prior art fails to teach or suggest the features of the claim. Accordingly, the combination of such references is insufficient to establish prima facie obviousness. The Applicant respectfully requests the rejection be withdrawn.

Regarding claim 4, the Final Office Action argued the Siegel, Katoh, Vinberg and Sheu combination discloses the claimed invention as applied to Claim 3, above. The Final Office Action argued the combination fails to explicitly disclose the concept of configuring parent-child relationship in association with at least one item utilizing an XML based file.

The Final Office Action argued Vinberg et al. discloses a system and method for monitoring components with the concept of configuring parent-child relationship in association with at least one item utilizing an XML based file (Col. 3, Lines 15-52; Col. 5, Line 65-Col. 6, Line 7, discloses developing a parent-child relationship in association with an item wherein utilizing a file encoded in XML).

The Final Office Action argued from the teaching of Vinberg et al., it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Siegel et al., Katoh, Vinberg and Sheu combination to include the well-known concept of configuring parent-child relationship in association with at least one item utilizing an XML based file to yield the predictable result of providing the ability to transmits the data file to a plurality of users having various data structures.

The Applicant respectfully notes that claim 4 has been amended to describe the replacement of parent parts. The Applicant respectfully asserts the combined prior art fails to teach or suggest the claimed features as required to establish prima facie obviousness. The Applicant respectfully requests the rejection be withdrawn.

Regarding claim 5, the Final Office Action argued Siegel, Katoh, Vinberg and Sheu combination discloses the claimed invention as applied to Claim 4, above. The Final Office Action argued Siegel et al. fails to explicitly disclose creating a name indicative of said parent component before and after a replacement of said parent component.

The Final Office Action argued Katoh discloses a maintenance management system with the concept of creating a name indicative of said parent component before and after a replacement of said parent component (Col. 8, Lines 13-14, discloses providing a name indicative of a component (i.e. parent component) thus each time a component is added or replaced a new name is given thus this is done both before and after).

The Final Office Action argued from the teaching of Katoh, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the a system of Siegel, Katoh, Vinberg and Sheu to include creating a name indicative of said parent component before and after a replacement of said parent component as taught by Katoh in order to aid in monitoring the usage of the components within a device by identifying the components comprised within the device.

The Applicant respectfully disagrees with this assessment. The cited material states in its entirety: "The component code data field includes data pertaining to an identifier for identifying each component."

By contrast, Applicant's claim states:

> The method of claim 4 wherein configuring said parent/child relationship in association with said at least one high frequency service item further comprises:
>
> creating a name indicative of said parent component before a replacement of said parent component; and
>
> creating a new name indicative of said parent component after replacement of said parent component.

The Applicant respectfully asserts that the material cited in the prior art does not teach or suggest the alteration of the name of the component. Indeed, the cited material only suggests that data can be identified.

Applicant's claim requires creating a "new name" after replacement. It is unclear how the cited material teaches or suggests creating a new name after replacement as claimed.

The Final Office Action suggests:

> As currently written the claim merely requires creating a name before and after replacement, it does not altering an existing name. As shown in Katoh Col. 8, Lines 13- 14, discloses providing a name indicative of a component (i.e. parent component) thus each time a component is added or replaced a new name is given thus this is done both before and after.

The Applicant respectfully asserts that this is incorrect for a number of reasons. First, a "new name" is, by any person's standard, different from an old

name. Thus, suggesting that the claim as written "does not altering an existing name" is an unreasonable interpretation of the claim. As further evidence, it is noteworthy that the new name is prefaced by the indefinite article "a" indicating it is not the same as the previously recited name; in other words "a name" and "a new name" are different features of the claim. No reading of the reference could be thought to teach or suggest more than one name. The claim requires more than one name.

Furthermore, the reference makes no statement regarding the teaching that "each time a component is added or replaced a new name is given thus this is done both before and after." This conclusion is not supported by the citation provided. It is instead a bald assertion of fact not supported by the reference itself.

The Applicant respectfully asserts that the statement that components have identifiers is insufficient to teach or suggest creating a name indicative of a parent component before replacement, and then creating a new name indicative of said parent component after replacement.

The Advisory Action responded to this argument by asserting:

> In regards to the applicant's arguments on pages 29-31, as shown in the reference col. 8, lines 4-12 each time a component is registered a name is provided. Thus it has a name prior and when it is replaced it has a new name thus after. As previously argued when combined the references continue to read over the claims as currently written and as such the rejections have been maintained.

The Applicant respectfully notes that the Applicant's claims never describe, "registering" anything. Thus, the disclosure in the reference which is, according to the Advisory Action, drawn to component registration, cannot possibly read on any of Applicant's claims. Further, the statement "Thus it has a name prior and when it is replaced it has a new name thus after," is wholly unsupported by the citation provided. The Applicant respectfully requests specific citation to the prior art material describing the alleged "new name." Without such citation a case of prima facie obviousness has not been established.

Finally, the Applicant respectfully reiterates that the proposed combination of references including Sheu and Vinberg requires a change in the principle of operation of the references rendering their teaching not prima facie obvious as discussed above.

The Applicant respectfully asserts that a case of prima facie obviousness has not been established and respectfully requests the rejection be withdrawn.

Regarding claim 6, the Final Office Action argued the Siegel, Katoh, Vinberg and Sheu combination discloses the claimed invention as applied to Claim 5, above. The Final Office Action argued Siegel et al. fails to explicitly disclose displaying a representation indicative of a need for said service action of said parent component, if said at least one item exceeds said threshold value.

The Final Office Action argued Katoh discloses a maintenance management system with the concept of displaying a representation indicative of a need for said service action of said parent component, if said at least one item exceeds said threshold value (Col. 2, Lines 51-67, discloses displaying a representation indicative of a need for said service action via the output of an alarm comprising component information when the component (i.e. high frequency service item) is less than or equal to a remainder day reference value).

The Final Office Action argued from the teaching of Katoh, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method and system for assessing an end of life in a system of the Siegel, Katoh, Vinberg and Sheu to include displaying a representation indicative of a need for said service action of said

The Applicant respectfully notes that claim 6 has been amended to describe the permissions allowed to the claimed child components. The combined prior art fails to teach or suggest such features. The Applicant respectfully requests the rejection be withdrawn.

Siegel in view of Katoh, Vinberg, Sheu, and Ohashi

Claims 7-9 were rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Siegel et al. (6,754,453) hereafter Siegel, in view of Katoh (7,865,090) here after Katoh, further in view of Vinberg et al. (7,797,147) hereafter Vinberg, further in view of Sheu, further in view of Ohashi (7,321,896) hereafter Ohashi.

Regarding Claim 7, the Final Office Action argued the Siegel, Katoh, Vinberg and Sheu combination discloses the claimed invention as applied to Claim 6, above. The Final Office Action argued the combination fails to explicitly disclose configuring a hierarchical structure to expressing via said hierarchical structure a relationship and a servicing function associated with said at least one item utilizing a related component indicator and a counter.

The Final Office Action argued Ohashi discloses a component management system with the concept of configuring a hierarchical structure to expressing via said hierarchical structure a relationship and a servicing function associated with said at least one item utilizing a related component indicator and a counter (Fig. 2, discloses the development of an hierarchical structure that express the relation between a plurality of components. Examiner asserts that the hierarchical structure is used to express a relationship and a servicing function associated with said at least one item holds little, if any, patentable weight. The intended purpose/use of the hierarchical structure fails to explicitly or implicitly alter the method steps of configuring a hierarchical structure.).

The Final Office Action argued from the teaching of Ohashi, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Siegel et al. and Katoh combination to include the concept of configuring a hierarchical structure as taught by Ohashi in order to provide the relationship between the different components comprised within an item.

The Applicant respectfully disagrees with this assessment. The Applicant respectfully notes that none of the cited prior art teaches or suggests the claimed features.

The Ohashi reference is directed to methods and systems for organizing products (such as printed circuit boards) during production. Nothing about this reference relates to the methods and systems described in the remaining cited prior art references or the technology described in Applicant's claims. Aside from the fact that the description of reference FIG. 2 includes the word "hierarchy" there is nothing about the Ohashi reference that is applicable to claim 7 in any capacity.

The Examiner's response to this argument admits as much stating, "the reference shows a hierarchy in that it includes components and sub components which are called parent components and child components." The Final Office Action apparently is not interested in the fact that the Ohashi reference is directed to management of an enterprise for manufacturing a product such as microchips and that the referenced hierarchy describes a "parent component drawing" and "child component drawings" which correspond to "a table of x-pieces of main components ... The main components comprise a box, an electric power source, a printed circuit board, and the like." In other words, the referenced hierarchy describes drawings of a product being manufactured. The Applicant's claimed hierarchy has nothing to do with drawings of a manufacturing product.

As such, the Applicant respectfully asserts there is no motivation to combine the references as suggested in the Office Action. Indeed, it is unclear why or how the component drawings described in Ohashi could be combined with the shock related replacement scheme in Sheu. Likewise, there is no explanation for why one skilled in the art would be motivated to include product drawings as described in Ohashi with the replacement scheme described in Siegel or the maintenance management system of Katoh. Such a combination is nonsensical.

The Applicant notes that MPEP 2143.01 explains:

V.THE PROPOSED MODIFICATION CANNOT RENDER THE PRIOR ART

UNSATISFACTORY FOR ITS INTENDED PURPOSE

If proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. In re Gordon, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984)

In this case, the Ohashi reference is unquestionably intended for the purpose of manufacturing products in a manufacturing environment. The proposed modification of all of the prior art references according to Ohashi would render the remaining combination (none of which are intended for mass manufacturing like Ohashi) unsatisfactory for their intended purpose. As such, there is no suggestion or motivation to make the proposed modification.

The Advisory Action responded to this argument as follows:

> In regards to the applicant's arguments on pages 32-34 regarding claim 7, these arguments were previously addressed in the prior Office Action page 49, lacking any additional arguments the Examiner has not been persuaded.

The Applicant respectfully notes that new arguments were presented which specifically addressed the comments provided in the Final Office Action. It appears therefore, that such arguments have not been considered. In particular, Applicant explained as follows:

> The Examiner's response to this argument admits as much stating, "the reference shows a hierarchy in that it includes components and sub components which are called parent components and child components." The Final Office Action apparently is not interested in the fact that the Ohashi reference is directed to management of an enterprise for manufacturing a product such as microchips and that the referenced hierarchy describes a "parent component drawing" and "child component drawings" which correspond to "a table of x-pieces of main components ... The main components comprise a box, an electric power source, a printed circuit board, and the like." In other words, the referenced hierarchy describes drawings of a product being manufactured. The Applicant's claimed hierarchy has nothing to do with drawings of a manufacturing product.

Accordingly, the Applicant respectfully asserts that the claimed features are not taught or suggested in the cited prior art, and the combination of prior art references as proposed would not be obvious. The Applicant respectfully requests the rejection of claim 7 be withdrawn.

Regarding claim 8, the Final Office Action argued Siegel et al. discloses wherein said service action comprises at least one of the following types of actions: a rebuild action, a repair action, a cleaning action, or a calibrate action (Col. 1, Lines 24-50, discloses the service action being a replace action Col. 2, lines 7-24, shows that the action can also be repairing of the parts based on the threshold values).

The Applicant respectfully asserts that, as stated above, the combination of Siegel, Katoh, Vineberg, Sheu, and Ohashi is not obvious and lacks motivation. The Applicant further notes that claim 8 has been amended to remove a repair action. As such, the disclosure of a "repairing or parts" or a replace action fails to teach or suggest the specific features of the claim. As such a case of prima facie obviousness has not been established with respect to claim 8. The Applicant respectfully requests the rejection be withdrawn.

Regarding Claim 9, the Final Office Action argued the Siegel, Katoh, Vinberg, Sheu and Ohashi combination discloses the claimed invention as applied to Claim 8, above. The Final Office Action argued Examiner asserts that the data identifying the components and "customer replaceable and service engineer serviceable" are considered to be labels for the components and adds little, if anything, to the claimed acts or steps and thus does not serve to distinguish over the prior art. The Final Office Action argued any differences related merely to the meaning and information conveyed through labels (i.e., the type of component) which does not explicitly alter or impact the steps of the method does not patentably distinguish the claimed invention from the prior art in terms of patentability.

The Applicant respectfully disagrees with this assessment. The Applicant respectfully asserts that the alleged "labels" further describe components and therefore serve to define the scope of the claims. The Applicant respectfully asserts that each of these "labels" are not labels so much as features of the invention. The Applicant is unaware of any rule or case suggesting that the "meaning and

information" conveyed via such descriptive terms do not deserve patentable consideration.

The Final Office Action responded to this argument by citing MPEP 2111.05 which describes the so called "printed matter" doctrine. The MPEP explains:

> The rationale behind the printed matter cases, in which, for example, written instructions are added to a known product, has been extended to method claims in which an instructional limitation is added to a method known in the art. Similar to the inquiry for products with printed matter thereon, in such method cases the relevant inquiry is whether a new and unobvious functional relationship with the known method exists. See In re Kao, 639 F.3d 1057, 1072-73, 98 USPQ2d 1799, 1811-12 (Fed. Cir. 2011); King Pharmaceuticals Inc. v. Eon Labs Inc., 616 F.3d 1267, 1279, 95 USPQ2d 1833, 1842 (Fed. Cir. 2010).

Unlike the printed matter cases, where for example, written instructions were added to a known product, the claimed features which describe the character of the part as one replaceable by a customer versus one serviceable only by a service engineer, describe a specific quality of the part. A discussion of the printed matter rule has no place in the analysis of these claimed features. Put another way, the claimed features explicitly "change how the steps of the method are performed" because they require service by either a customer or a service engineer.

Examples of features that received no patentable weight under the printed matter rule include images on a hatband not arranged in a particular sequence, printed matter on dice, or other situations where the claim is directed to printed material conveying a message to a human reader. No such claim features are presented in Applicant's claim 8.

The Advisory Action responded to this argument by asserting:

> In response to the applicant's arguments on pages 34-36, regarding claim 9, the section of MPEP 2111.05 also shows that the titles given to specific data is still considered non-functional descriptive material. At no point has the applicant stated why these titles provide any functionality to the claims. As such lacking any additional arguments the Examiner has not been persuaded.

The Applicant respectfully firstly notes that it is not the Applicant's burden to establish "why these titles provide any functionality." The MPEP requires:

> USPTO personnel must consider all claim limitations when determining patentability of an invention over the prior art. In re Gulack, 703 F.2d 1381, 1385, 217 USPQ 401, 403-04 (Fed. Cir. 1983). Since a claim must be read as a whole, USPTO personnel may not disregard claim limitations comprised of printed matter. See Id. at 1384, 217 USPQ at 403; see also Diamond v. Diehr, 450 U.S. 175, 191, 209 USPQ 1, 10 (1981).

Furthermore, the claim does not require that a label be printed on the parent component or child component. Instead, the term "customer replaceable component" refers to a quality of the component. In other words, the printed matter doctrine does not apply in this case because there is no printed matter.

The Applicant further notes that, as with the previous claims, there is no motivation for the proposed combination of references.

The Applicant respectfully notes that in order to establish prima facie obviousness each and every claimed feature must be indentified in the cited prior art references. Here, no citation has been provided which teaches or suggests that a child component comprises a service engineer serviceable component. Accordingly, the Applicant respectfully asserts a case of prima facie obviousness has not been established and the claim should be moved to allowance.

Siegel in view of Katoh, Vinberg, Sheu, Ohashi, and Official Notice

Claims 10-12 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Siegel et al. (6,754,453) in view of Katoh (7,865,090), further in view of Vinberg et al. (7,797,147) hereafter Vinberg, in further view of Sheu, in further view of Ohashi, and in further view of Official Notice.

Regarding Claim 10, the Final Office Action argued the Siegel, Katoh, Vinberg, Sheu and Ohashi combination discloses the concept of replacing a parent component. The Final Office Action argued the combination fails to explicitly disclose the concept of rebuilding a parent component.

The Examiner took Official Notice that it is old and well known in the art the rebuild a component. The Final Office Action argued for example, people choose to rebuild a car engine rather than purchase a new car engine when needed. Nagata (US 2004/0034566) discloses the concept of rebuilding car components. Morti (US 2005/0015181) discloses the concept of rebuilding car components.

The Final Office Action argued it would have been obvious to one of ordinary skill in the art to modify the Siegel et al. and Katoh combination to include the concept of rebuilding a parent component in order to reduce waste and energy consumption and the cost of repair.

The Applicant respectfully disagrees with this assessment. Regarding the above referenced "Official Notice" by the Examiner, Applicant notes that the Office Action attempts to officially notice legal conclusions, –namely permitting the rebuilding of a parent component in order to reduce down time and service cost would have been obvious. Official Notice, however, is only proper for facts. (*MPEP § 2144.03*). Indeed, Official Notice is only permissible for those few facts that are of a "notorious character" and that are "capable of instant and unquestionable demonstration". (*MPEP § 2144.03(A)*). It is improper to use Official Notice for conclusions of law.

Secondly, the Office Action relies on Official Notice as essentially the "principal evidence" upon which the rejection regarding the rebuilding of a parent component given the lack of teaching by all of the other references of Applicant's claim limitations. Official Notice cannot be used in this manner. As Section 2144.03(A) of the *MPEP* expressly warns, it is never appropriate to rely solely on Official Notice as the principal evidence upon which a rejection was based. Instead, Official Notice is only appropriate for facts and that serve to "fill in the gaps" in a rejection. (*MPEP § 2144.03(A)*). This is why official notice is to be judicially applied. (*MPEP § 2144.03*). It is unreasonable to conclude that the Office has used Official Notice to "fill in" a gap in this rejection.

Thirdly, the Office attempts to take Official Notice of matter that is not "capable of instant and unquestionable demonstration", as expressly required by section 2144.03(A) of the *MPEP*. Indeed, even assuming *arguendo* that people choosing to rebuild car engines is a fact, this fact would be neither of notorious character nor instantly and unquestionably demonstrable in the context of a rendering device or components thereof as claimed. Moreover, courts have long rejected the notion that official notice can be taken on the state of the art. (See Memorandum to Patent Examining Corps from the Deputy Commissioner for Patent Examining Policy regarding Procedures for Relying on Facts Which are Not of Record as Common Sense or for Taking Official Notice, n.6, citing In re Eynde, 480 F.2d 1364, 1370, 178 USPQ 470, 474 (CCPA 1973)). Thus, the Office's attempt to officially notice the claimed features via the state of the art for car repair is improper as a matter of law.

As support, the alleged documentary evidence provided by the Examiner suggests that it is well known that "people choose to rebuild a car engine rather than purchase a new car engine when needed." Applicant's claimed feature have nothing to do with cars, engines, rebuilding cars, or what might be well known with respect to the repair or rebuilding of car engines. Applicant's claims relate specifically to parent and child components in a rendering device, and no support has been provided for the position that <u>any</u> of the features of claim 10 are "capable of instant and unquestionable demonstration", as expressly required by section 2144.03(A) of the *MPEP*. If the claimed features were of such notorious character it should require little effort on the Examiner's part to provide citations teaching or suggesting these claimed features. Yet in the five plus years of prosecution of this case, no such reference has <u>ever</u> been provided.

The Advisory Action argued:

> In response to the applicant's arguments on pages 36-38, the applicant's arguments toward the official notice have already been previously responded to. Further the references were not used to show the entirety of the claimed invention but merely that it is old and well known to rebuild parts

> or components. The applicant has not provided any reason or rationale that shows this is not well known other than to state that it isn't. As such the Examiner asserts that the applicant's arguments are not persuasive and the rejections have been maintained.

The Applicant respectfully notes that no citation beyond the official notice has been provided as teaching or suggesting any of the features of Applicant's claim. Thus, the Official Notice has been "used to show the entirety of the claimed invention."

Additionally, it is not Applicant's burden to establish that it is not well known to replace parts in a car, as described in the Official Notice, because Applicant's claims have nothing to do with replacing parts in a car.

In sum, the Office's attempts at Official Notice are improper and traversed. Consequently, there are evidentiary gaps in the rejection of claim 10 that are fatal to a *prima facie* case of obviousness. The Applicant respectfully requests the rejection therefore be withdrawn.

Regarding Claim 11, the Final Office Action argued the Siegel, Katoh, Vinberg, Sheu and Ohashi combination discloses the claimed invention as applied to Claim 4, above.

The Final Office Action argued Katoh discloses a maintenance management system with changing said service relationship between said at least one high frequency service item (Col. 8, Lines 13-14, discloses providing a name indicative of a component (i.e. parent component) thus each time a component is added or replaced a new name is given thus this is done both before and after. Thus changing the relationship as different names for the parts which are replaced).

The Final Office Action argued the combination fails to explicitly disclose the concept of changing said service relationship between said at least one high frequency service item by updating a file via a user (i.e. remote service provider).

The Examiner took Official Notice that it is old and well known in the art for a user to update information contained in a file. For example, Hilbert et al. (US

2005/0192966) and Manzano (US 2010/0005138) discloses the concept of a remote user updating a file.

The Final Office Action argued it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Siegel, Katoh, Vinberg, Sheu and Ohashi combination to include the concept of updating a file via a user in order to maintain an up-to-date of the parent-child relationship and the services performed on the components.

The Applicant respectfully disagrees with this assessment. The Applicant respectfully asserts that the Examiner's Official Notice does not address the features of the claim. The Examiner notice that "it is old and well known in the art for a user to update information contained in a file." However, Applicant's claim describes updating a service relationship by a remote service provider (not a user). The Applicant's claims include features well beyond the basic disclosure of a user updating a file. Thus, even assuming the Examiner is correct that a user updating a file is well known (the Applicant is not admitting this is correct), the asserted Official Notice fails to read on the claimed features.

Accordingly, the Applicant respectfully asserts that the Official Notice is traversed and respectfully requests the rejection be withdrawn.

Regarding Claim 12, the Final Office Action argued Siegel et al. discloses associating said at least one service count with a particular name of an assembly thereof (Col. 1, Lines 24-50; Col. 3, Line 59-Col. 4, Line 56, discloses the concept of associating a count with a particular replaceable element being monitored, wherein the replaceable element has a particular name such as a photoreceptor); and replacing a name of said another assembly with a different name (Col. 1, Lines 24-50, discloses replacing the replaceable element with another replaceable element.

The Final Office Action argued Examiner asserts that the other assembly has a different name fails too explicitly or implicitly alter the method step of replacing an assembly. The Final Office Action argued the method step of replacing an assembly

would be performed the same regardless of the name of the replacement assembly. The Final Office Action argued the fact that the replacement assembly has a different name fails to be distinguishable over the prior art.).

The Final Office Action argued Katoh teaches that each component has its own name in the maintenance plan and that it has its own alarm limits which are monitored tracked and used to replace the components when necessary (Col. 16, lines 35-63).

The Applicant respectfully disagrees with this assessment. The Applicant respectfully asserts that the Examiner's position that "the method step of replacing an assembly would be performed the same regardless of the name of the replacement assembly" is a tacit admission that the prior art fails to teach or suggest this claimed feature. The claimed feature is affirmatively stated and deserves examination along with every other of the claimed features.

Without the claimed name change, the component cannot be tracked for later replacement or for use. If the same name was utilized each time, it would be impossible to track which components have been replaced, which are new, and which have been rebuilt. This name change limitation is therefore patentably distinguishable over the prior art.

The Advisory Action responded to this argument stating:

> In response to the applicant's arguments on pages 39-41, regarding claim 12, while the applicant argues that these features are patentably distinguish over the prior art the applicant has recited steps which are not currently required in the claim 12, specifically tracking and later replacement. Rather for claim 12 the step of replacing an assembly doesn't change regardless of what it is named. As such the Examiner asserts that the applicant's arguments are not persuasive and the rejections have been maintained.

The Applicant respectfully disagrees with this assessment. The Applicant has not argued that the claim requires tracking. The claim does require "replacing said assembly with another assembly."

The Applicant respectfully asserts that the argument "replacing an assembly doesn't change regardless of what it is named" does not address the claimed features. The claim requires associating a count with a particular assembly name; replacing that assembly; and replacing the name of the second assembly with a different name. The combined prior art does not teach any of these features in any capacity regardless of whether or not, "replacing an assembly doesn't change regardless of what it is named," is correct.

The Final Office Action has failed to offer any citation teaching or suggesting this claim feature and there is no justification for ignoring examination of the feature. The combined prior art therefore fails in the aforementioned *prima facie* obviousness test as each and every limitation of the Applicant's claims is not disclosed. Based on the foregoing, the Applicant respectfully requests that the rejection be withdrawn.

Siegel in view of Katoh, Vinberg, Sheu, Ohashi, Official Notice and Whittaker

Claim 13 is rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Siegel et al. (6,754,453) in view of Katoh (7,865,090), further in view of Vinberg et al. (7,797,147) hereafter Vinberg, furthering in view of Sheu, further in view of Ohashi, further in view of Official Notice, and in further view of Whittaker (WO 2009/070347 A1) hereafter Whittaker.

Regarding Claim 13, the Final Office Action argued the Siegel, Katoh, Vinberg, Sheu, Ohashi and Official Notice combination discloses the concept of having a counter associated with an item wherein the count reaches a predetermined value (the life of the part) the item is replaced. The Final Office Action argued the combination fails to disclose the concept of storing the count in an RFID tag on an assembly.

The Final Office Action argued Whittaker discloses a system and method for condition-based maintenance of mechanical systems with the concept of storing the count in an RFID tag on an assembly (Abstract; [0022] discloses the concept of strong service life information in an RFID tag that is attached to an item).

The Final Office Action argued from the teaching of Whittaker, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Siegel, Katoh, Vinberg, Sheu, Ohashi and Official Notice combination to include the concept of storing the count in an RFID tag on an assembly as taught by Whittaker in order to monitor the life expenditure of a device in order to prevent premature retirement of a component or system and the predict the time of failure.

The Applicant respectfully disagrees with this assessment and notes that the argument presented above against the rejections of claim 1 over Siegel in view of Katoh and Vinberg applies equally against the rejection of dependent claim 13.

Furthermore, the Applicant respectfully asserts that the combination of Whittaker with the remaining six references would not be obvious to one skilled in the art. Whittaker describes:

> a modular onboard system that can continuously (or nearly continuously) collect Life cycle determinant data from one or more sensors distributed on various parts (or components) of a mechanical system (e.g. a vehicle).

The combination of this external hardware module would require a change in principle of operation in Siegel and Katoh both of which do not make use of such an onboard system. Further, the Vinberg reference uses a modeling system which has no use for the cited external module in any capacity. Combination with the Sheu reference would require reconfiguration of the Whittaker module to track shock, and there is no practical or possible way to combine the Whittaker disclosure with the manufacturing reference described in Ohashi. In short, the alleged combination of the seven cited references would not be obvious to one skilled in the art.

The Advisory Action responded to this argument by asserting:

> With regards to claims 13 and 14, the Examiner asserts that the applicant fails to address why the citations and associated explanations provided are incorrect. The applicant's arguments are nothing more than conclusionary statements that merely state that the applicant does not believe the references to not teach the invention, as claimed.

This mischaracterization of Applicant's position is worrying. At no point in the argument previously presented, does the Applicant suggest, "applicant does not believe the references to not teach the invention, as claimed." Instead, the previously presented argument is suggesting that the combination of references would not be obvious to one skilled in the art. The difference between this position and the "applicant does not believe the references to not teach the invention, as claimed" is striking.

The combined prior art fails in the aforementioned *prima facie* obviousness test because the combination of references is not obvious. Based on the foregoing, the Applicant respectfully requests that the 35 U.S.C. §103(a) rejection of claim 13 be withdrawn.

Siegel in view of Katoh, Vinberg, Sheu, Ohashi, Official Notice, Whittaker, and Sawada

Claim 14 is rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Siegel et al. (6,754,453) in view of Katoh (7,865,090), further in view of Vinberg et al. (7,797,147) hereafter Vinberg, furthering view of Sheu, further in view of Ohashi, further in view of Official Notice, further in view of Whittaker, and in further view of Sawada (6,141,507) hereafter Sawada.

Regarding Claim 14, the Final Office Action the Siegel, Katoh, Vinberg, Sheu, Ohashi and Official Notice combination fails to explicitly disclose the concept of storing at least one count and said particular name in a memory associated with a rendering device.

The Final Office Action argued Sawada discloses a service system for managing image forming apparatuses for promoting rapid and adequate maintenance or repair with the concept of storing at least one count and said particular name in a memory associated with a rendering device (Col. 10, Line 50-Co1.11, Line 18, discloses a counter associated with a part wherein a count and the name of the part are stored in the information storage).

The Final Office Action argued from the teaching of Sawada, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Siegel, Katoh, Vinberg, Sheu, Ohashi and Official Notice combination to include the concept of storing at least one count and said particular name in a memory associated with a device as taught by Sawada in order to maintain a record of the components in need of repair and replacement.

The Applicant respectfully disagrees with this assessment and notes that the argument presented above against the rejections of claim 1 over Siegel in view of Katoh applies equally against the rejection of dependent claim 14.

The Applicant further asserts that the combination of Sawada with the remaining prior art references would not be obvious to one skilled in the art. Sawada discloses a method for providing information related to a device, to a user from a central network. None of the other references teach or suggest a need to apprise users of the specifications associated with a device. Thus, one skilled in the art would not be motivated to combine Sawada with the remaining seven references. Additionally, the combination of Sawada would change the principle of operation of the remaining combination of references.

As with claim 13, the Advisory Action responded to this argument by asserting:

> With regards to claims 13 and 14, the Examiner asserts that the applicant fails to address why the citations and associated explanations provided are incorrect. The applicant's arguments are nothing more than conclusionary statements that merely state that the applicant does not believe the references to not teach the invention, as claimed.

This mischaracterization of Applicant's position is likewise worrying. At no point in the argument previously presented, does the Applicant suggest, "applicant does not believe the references to not teach the invention, as claimed." Instead, the previously presented argument is suggesting that the combination of references would not be obvious to one skilled in the art. The difference between this position and the suggestion that the "applicant does not believe the references to not teach the invention, as claimed" is striking.

Based on the foregoing, the Applicant respectfully requests that the 35 U.S.C. §103(a) rejection of claim 13 be withdrawn.

Siegel in view of Katoh

Claims 15-16 and 20 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Siegel et al. (6,754,453) hereafter Siegel, in view of Katoh (7,865,090) here after Katoh.

Regarding Claim 15, the Final Office Action argued Siegel et al. discloses a system for managing high frequency service items associated with a rendering device, said system comprising: a processor, a data bus coupled to the processor; and a computer-usable medium coupled to the data bus (Col. 1, Line 24-Co1.2, Line 57; Col. 6, Lines 51-63, via a document processing system being programmed to monitor the cycle counts and measure the wear to a replaceable element, wherein the document processing system have computer, fax, local area network, and Internet connection capability), the computer program code comprising instructions executable by the processor and configured for:

a rendering device (Col. 2, Line 65-Co1.3, Line 4, discloses high frequency service items (i.e. parent components) having parts (i.e. child components) comprised within a document processing system (i.e. a device));

at least one high frequency service items that is associated with and a component of said rendering device comprising a parent component associated with said rendering device and at least one child component (Col. 2, Line 65-Co1.3, Line 4, discloses high frequency service items (i.e. parent components) having parts (i.e. child components) comprised within a document processing system (i.e. a device));

associated with said rendering device and at least one child component comprising at least one sub-part of said parent component wherein only said parent component is customer replaceable (Col. 2, Line 65-Co1.3, Line 4, discloses high frequency service items (i.e. parent components) having parts (i.e. child components) comprised within a document processing system (i.e. a device), the fact that the child component is not customer replaceable does not change or alert steps in any way as it does not describe the steps but rather the title of person performing them. Further this does not change the structure as it does not change how the components are made or how they function, please see MPEP 2111.05, specifically as stated "the court Noted that a "'whereby clause in a method claim is not given weight when it simply expresses the intended result of a process step positively recited.;" Id. (quoting Minton v. Nat'l Ass'n of Securities Deelers, Inc., 338 F.3d 1373, 1381; 67 USPQ2d I(}I4, 1620 (Fed, Ciro 2003))," in this case the positively recited step is configuring and the title given to the person who performs this step does change the step itself, but is merely directed toward a particular user performing an action outside the scope of [he claim);

monitoring a status of said at least one high frequency service item with respect to a threshold value replacing said parent component if said at least one child component associated with said high frequency service items exceeds said threshold value for said service action (Col. 1, Lines 24-50, discloses the concept of monitoring high frequency service items with respect to a predetermined value (i.e. threshold value) wherein when a high frequency service item part (i.e. child

component) reaches a predetermined value, service on the part is needed. Col. 1, Lines 24-50, discloses replacing a high frequency service item part); and

performing a service action to said at least one child component associated with said parent component on replacement of said parent component in order to retain life of said parent component, thereby maximizing a utilization of said at least one high frequency service item and a reliability with respect to said device (Col. 1, Lines 24-50, discloses replacing a high frequency service item part. Col. 2, lines 7-24, shows that the action can also be repairing of the parts based on the threshold values).

The Final Office Action argued Siegel et al. fails to explicitly disclose configuring a parent/child relationship in association with at least one item.

The Final Office Action argued Katoh discloses a maintenance management system with the concept of configuring a parent/child relationship is association with at least one item (Col. 11, Line 64-Col. 12, Line 3; Col. 15, Lines 9-23, discloses the concept of identifying parent-child relationships of components in association with an item). Katoh further teaches replacing items based on threshold, creating a maintenance plan with an individual component identifier with its own plan and replacing the component when the threshold is achieved (Col. 16, lines 35-63; teaches tracking each component and naming each component with an individual component identifier and replacing the component when the threshold or alarm limit is reached).

The Final Office Action argued from the teaching of Katoh, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method and system for assessing an end of life in a system of Siegel et al. to include configuring a parent/child relationship in association with at least one item as taught by Katoh in order to manage the service needs regarding an item wherein one component may affect the service quality of another component based on their relationship.

The Applicant respectfully asserts the arguments and amendments presented in favor of claim 1 apply equally to the present rejection but are reserved in the interest of brevity. The Applicant respectfully requests the rejection of claim 15 be withdrawn.

Regarding Claim 16, the Final Office Action argued Siegel et al. discloses the concept service counts being associated with components of s document processing system wherein a high frequency service item counter is reset to zero when the part is replaces (via Col. 1, Lines 24-50). The Final Office Action argued Katoh discloses the concept of performing a service action on a parent component wherein the child components are also replaced as a result (via Col. 16, Line 64-Col. 17, Line 16).

The Final Office Action argued the Siegel et al. and Katoh combination fails to explicitly disclose the service count associated with a child component to follow a count associated with the parent component upon replacement of parent component after performing a service action.

The Final Office Action argued Examiner asserts it would have been obvious to one of ordinary skill in the art at the time the invention was made to have the counter for the parts of the high frequency service item as disclosed in Siegel et al. be reset when the high frequency item (i.e. parent component) itself is replaced since all the parts (i.e. child components) are being replaced as a result of the high frequency item being replaced in order to adequately monitor the useful life remaining for all the components.

The Applicant respectfully asserts the arguments presented above apply equally to the present rejection but are reserved in the interest of brevity. The Applicant respectfully requests the rejection of claim 16 be withdrawn.

Regarding Claim 20, the Final Office Action argued Siegel et al. discloses a non-transitory computer-usable medium for managing high frequency service items associated with a rendering device, said computer-usable medium embodying computer program code (Col. 1, Line 24-Co1. 2, Line 57; Col. 6, Lines 51-63, via a

document processing system being programmed to monitor the cycle counts and measure the wear to a replaceable element, wherein the document processing system have computer, fax, local area network, and Internet connection capability), said computer program code comprising computer executable instructions configured for:

at least one high frequency service items that is associated with and a component of said rendering device comprising a parent component and at least one child component (Col. 2, Line 65-Co1.3, Line 4, discloses high frequency service items (i.e. parent frequency service items (i.e. parent components) having parts (i.e. child components) comprised within a document processing system (i.e. a device), associated with said rendering device and at least one child component comprising at least one sub-part of said parent component wherein only said parent component is customer replaceable (Col. 2, Line 65-Co1.3, Line 4, discloses high frequency service items (i.e. parent components) having parts (i.e. child components) comprised within a document processing system (i.e. a device), the fact that the child component is not customer replaceable does not change or alert steps in any way as it does not describe the steps but rather the title of person performing them. Further this does not change the structure as it does not change how the components are made or how they function, please see MPEP 2111.05, specifically as stated "the court noted that a "'whereby clause in a method claim is not given weight when it simply expresses the intended result of a process step positively recited.'" Id. (quoting Minton v. Nat'l Ass'n of Securities Dealers, tnc., 336 F°3d 1373° t38t, 67 USPQ2d 1514, 1620 (Fed. Ciro 2003))." in this case the positively recited step is configuring and the title given to the person who performs this step does change the step itself, but is merely directed toward a particular user performing an action outside the scope of the claim);

monitoring a status of said at least one high frequency service item with respect to a threshold value replacing said parent component if said at least one child component associated with said high frequency service items exceeds said

threshold value for said service action (Col. 1, Lines 24-50, discloses the concept of monitoring high frequency service items with respect to a predetermined value (i.e. threshold value) wherein when a high frequency service item part (i.e. child component) reaches a predetermined value, service on the part is needed. Col. 1, Lines 24-50, discloses replacing a high frequency service item part); and

performing a service action to said at least one child component associated with said parent component on replacement of said parent component in order to retain life of said parent component, thereby maximizing a utilization of said at least one high frequency service item and a reliability with respect to said device (Col. 1, Lines 24-50, discloses replacing a high frequency service item part. Col. 2, lines 7-24, shows that the action can also be repairing of the parts based on the threshold values).

The Final Office Action argued Siegel et al. fails to explicitly disclose configuring a parent/child relationship in association with at least one item.

The Final Office Action argued Katoh discloses a maintenance management system with the concept of configuring a parent/child relationship is association with at least one item (Col. 11, Line 64-Co1.12, Line 3; Col. 15, Lines 9-23, discloses the concept of identifying parent-child relationships of components in association with an item).

The Final Office Action argued Katoh further teaches replacing items based on threshold, creating a maintenance plan with an individual component identifier with its own plan and replacing the component when the threshold is achieved (Col. 16, lines 35-63; teaches tracking each component and naming each component with an individual component identifier and replacing the component when the threshold or alarm limit is reached).

The Final Office Action argued from the teaching of Katoh, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method and system for assessing an end of life in a system of Siegel et al. to include configuring a parent/child relationship in association with at least one

item as taught by Katoh in order to manage the service needs regarding an item wherein one component may affect the service quality of another component based on their relationship.

The Applicant respectfully asserts the arguments and amendments presented above apply equally to the present rejection but are reserved in the interest of brevity. The Applicant respectfully requests the rejection of claim 20 be withdrawn.

Siegel in view of Katoh and Sheu

Claim 17 is rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Siegel et al. (6,754,453) in view of Katoh (7,865,090) and in further view of Sheu et al. (1996).

Regarding Claim 17, the Final Office Action argued the Siegel et al. and Katoh discloses the concept of resetting counter corresponding to a component after a service action has been performed on the component. The Final Office Action argued the Siegel et al. and Katoh combination fails to explicitly disclose the concept of replacing at least one component after a certain number of service actions (i.e. repairs) have been done.

The Final Office Action argued Sheu et al. discloses the concept of determining a replacement policy for a system with the concept of replacing at least one component after a certain number of service actions (i.e. repairs) have been done (Page 2, discloses replacing a system after a certain number of minimal repairs have been done).

The Final Office Action argued from the teaching of Sheu et al., it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Siegel et al. and Katoh combination to include the known concept of replacing at least one component after a certain number of service actions (i.e. repairs) have been done as taught by Sheu et al. in order to aid in reducing the cost associated with running and maintaining the system.

The Applicant respectfully asserts the arguments and amendments presented above apply equally to the present rejection but are reserved in the interest of brevity. The Applicant respectfully requests the rejection of claim 17 be withdrawn.

Siegel in view of Katoh, Sheu, and Vinberg

Claim 18 is rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Siegel et al. (6,754,453) in view of Katoh (7,865,090), further in view of Sheu, and in further view of Vinberg et al. (7,797,147).

Regarding Claim 18, the Final Office Action argued the Siegel et al., Katoh and Sheu combination discloses the claimed invention as applied to Claim 17, above. The Final Office Action argued the combination fails to explicitly disclose the concept of configuring parent-child relationship in association with at least one item utilizing an XML based file.

The Final Office Action argued Vinberg et al. discloses a system and method for monitoring components with the concept of configuring parent-child relationship in association with at least one item utilizing an XML based file (Col. 3, Lines 15-52; Col. 5, Line 65-Col. 6, Line 7, discloses developing a parent-child relationship in association with an item wherein utilizing a file encoded in XML).

The Final Office Action argued from the teaching of Vinberg et al., it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Siegel et al., Katoh and Sheu combination to include the well-known concept of configuring parent- child relationship in association with at least one item utilizing an XML based file to yield the predictable result of providing the ability to transmits the data file to a plurality of users having various data structures.

The Applicant respectfully asserts the arguments and amendments presented above apply equally to the present rejection but are reserved in the interest of brevity. The Applicant respectfully requests the rejection of claim 18 be withdrawn.

Siegel in view of Katoh, Sheu, Vinberg, and Ohashi

Claim 19 is rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Siegel et al. (6,754,453) in view of Katoh (7,865,090), further in view of Sheu, further in view of Vinberg, and in further view of Ohashi (7,321,896).

Regarding Claim 19, the Final Office Action argued the Siegel et al., Katoh, Sheu and Vinberg combination discloses the claimed invention as applied to Claim 18, above. The Final Office Action argued the combination fails to explicitly disclose configuring a hierarchical structure to expressing via said hierarchical structure a relationship and a servicing function associated with said at least one item utilizing a related component indicator and a counter.

The Final Office Action argued Ohashi discloses a component management system with the concept of configuring a hierarchical structure to expressing via said hierarchical structure a relationship and a servicing function associated with said at least one item utilizing a related component indicator and a counter (Fig. 2, discloses the development of an hierarchical structure that express the relation between a plurality of components. The Final Office Action argued Examiner asserts that the hierarchical structure is used to express a relationship and a servicing function associated with said at least one item holds little, if any, patentable weight. The intended purpose/use of the hierarchical structure fails to explicitly or implicitly alter the method steps of configuring a hierarchical structure.).

The Final Office Action argued from the teaching of Ohashi, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Siegel et al., Katoh, Sheu and Vinberg combination to include the concept of configuring a hierarchical structure as taught by Ohashi in order to provide the relationship between the different components comprised within an item.

The Applicant respectfully asserts the arguments presented above apply equally to the present rejection but are reserved in the interest of brevity. The Applicant respectfully requests the rejection of claim 16 be withdrawn.

IV. Conclusion

In view of the foregoing discussion, the Applicant has responded to each and every rejection of the Final Official Action. The Applicant has clarified the structural distinctions of the present invention. Applicant respectfully requests the withdrawal of the objections and rejections under 35 U.S.C. §101, and §103 based on the preceding remarks. Reconsideration and allowance of Applicant's application is also respectfully solicited.

Should there be any outstanding matters that need to be resolved, the Examiner is respectfully requested to contact the undersigned representative to conduct an interview in an effort to expedite prosecution in connection with the present application.

Respectfully submitted,

Dated: May 3, 2016

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CLAIMS

Please amend claims 1-4, 6, 8, 15-18, and 20 as follows:

1. (Currently Amended) A method for managing high frequency service items associated with a rendering device, said method comprising:

configuring a parent/child relationship in association with at least one high frequency service item utilizing an XML based computer system, wherein said at least one high frequency service item is associated with and a component of said rendering device, said parent/child relationship comprising a parent component associated with said rendering device and at least one child component comprising at least one sub-part of said parent component wherein said parent component is customer replaceable;

storing a preset number of total images for said at least one high frequency service item and at least one threshold value associate with said at least one high frequency service item in a memory device integrated in said at least one high frequency service item;

monitoring a status of said at least one high frequency service item with respect to ~~a~~ said at least one threshold value utilizing said XML based computer system with a high frequency service interval monitor integrated in said high frequency service item;

updating said XML based computer system by a remote service provider connected to said XML based computer system over a wireless communication channel when said parent/child relationship changes;

displaying a hierarchical structure illustrative of said parent/child relationships in a graphical user interface provided by said high frequency service interval monitor on a display associated with said rendering device;

activating a parent component indicator on said rendering device when said at least one threshold value is reached;

performing a service action on said at least one child component when a service threshold for said child component is exceeded ~~associated with said parent component in order to retain life of said parent component~~; and

replacing said parent component if said at least one child component ~~associated with said high frequency service item~~ exceeds a ~~said~~ threshold value for said service action ~~wherein an indicator for replacing said parent component is displayed upon said child component exceeding said threshold value~~, thereby maximizing a utilization of said at least one high frequency service item and a reliability with respect to said rendering device.

2. (Currently Amended) The method of claim 1 further comprising configuring at least one service count associated with said at least one child component to follow a count associated with said parent component upon replacement of said parent component ~~into said rendering device after performing said service action~~.

3. (Currently Amended) The method of claim 2 further comprising configuring said parent/child relationship to replace at least one parent component with a replacement parent component if any of said child components of said parent component exceed said threshold value for service action ~~component after a certain count of instances a counter associated with said at least one child component is reset based on said service action~~.

4. (Currently Amended) The method of claim 3 further comprising:

repairing all said child components of said at least one parent component after said parent component has been replaced by said replacement parent component;

saving said parent component;

removing said replacement parent component if any of said child components of said parent component exceed said threshold value for service action; and

reinstalling said parent component ~~wherein configuring a parent/child relationship in association with at least one high frequency service item further comprises configuring said parent-child relationship in association with said at least one high frequency service item utilizing an XML based file~~.

5. (Previously Presented) The method of claim 4 wherein configuring said parent/child relationship in association with said at least one high frequency service item further comprises:

creating a name indicative of said parent component before a replacement of said parent component; and

creating a new name indicative of said parent component after replacement of said parent component.

6. (Currently Amended) The method of claim 5 further comprising:

restricting access to said child components to everyone but a service engineer. ~~wherein monitoring a status of said at least one high frequency service item with respect to said threshold value, further comprises:~~

~~automatically displaying a representation indicative of a need for said service action of said parent component, if said at least one high frequency service item exceeds said threshold value.~~

7. (Previously Presented) The method of claim 6 further comprising configuring a hierarchical structure;

expressing via said hierarchical structure a relationship and a servicing function associated with said at least one high frequency service item utilizing a related component indicator and a counter.

8. (Currently Amended) The method of claim 7 wherein said service action comprises at least one of the following types of actions: a rebuild action, ~~a repair action,~~ a cleaning action, or a calibrate action.

9. (Previously Presented) The method of claim 8 wherein said parent component is a customer replaceable component and said at least one child component is a service engineer serviceable component.

10. (Previously Presented) The method of claim 9 further comprising permitting rebuilding of said at least one parent component in order to reduce down time and service cost associated with said at least one high frequency service item.

11. (Previously Presented) The method of claim 10 further comprising changing said service relationship between said at least one high frequency service item by updating said XML based file via at least one remote service provider thereby providing more optimum replacement strategy.

12. (Previously Presented) The method of claim 11 further comprising:

associating said at least one service count with a particular name of an assembly thereof;

replacing said assembly with another assembly; and

replacing a name of said another assembly with a different name.

13. (Previously Presented) The method of claim 12 further comprising:

storing said at least one service count in an RFID tag on said assembly.

14. (Previously Presented) The method of claim 13 further comprising:

storing said at least one count and said particular name in a memory associated with said rendering device.

15. (Currently Amended) A system for managing high frequency service items associated with a rendering device, said system comprising:

a rendering device;

a processor;

a data bus coupled to the processor; and

[[a]] an XML based computer-usable medium embodying computer code, the computer-usable medium being coupled to the data bus, the computer program code comprising instructions executable by the processor and configured for:

configuring a parent/child relationship in association with at least one high frequency service item, wherein said at least one high frequency service item is associated with and a component of said rendering device, said parent/child relationship comprising a parent component associated with said rendering device and at least one child component comprising at least one sub-part of said parent component wherein said parent component is customer replaceable;

storing a preset number of total images for said at least one high frequency service item and at least one threshold value associate with said at least one high frequency service item in a memory device integrated in said at least one high frequency service item;

monitoring a status of said at least one high frequency service item with respect to [[a]] said at least one threshold value with a high frequency service interval monitor integrated in said high frequency service item;

updating said XML based computer system by a remote service provider when said parent/child relationship changes;

displaying a hierarchical structure illustrative of said parent/child relationships in a graphical user interface provided by said high

frequency service interval monitor on a display associated with said rendering device;

activating a parent component indicator on said rendering device when said at least one threshold value is reached;

performing a service action on said at least one child component when a service threshold for said child component is exceeded ~~associated with said parent component in order to retain life of said parent component~~; and

replacing said parent component if said at least one child component ~~associated with said high frequency service item~~ exceeds said threshold value for said service action, thereby maximizing a utilization of said at least one high frequency service item and a reliability with respect to said device.

16. (Currently Amended) The system of claim 15 wherein said instructions are further configured for modifying at least one service count associated with said at least one child component to follow a count associated with said parent component upon replacement of said parent component ~~into said device after performing said service action~~.

17. (Currently Amended) The system of claim 16 wherein said instructions are further configured for modifying said parent/child relationship to replace at least one parent component with a replacement parent component if any of said child components of said parent component exceed said threshold value for service action ~~component after a certain count of instances a counter associated with said at least one child component is reset based on said service action~~.

18. (Currently Amended) The system of claim 17 further comprising:

a replacement parent component wherein all said child components of said at least one parent component are repaired after said parent component has been replaced by said replacement parent component, said parent component is saved, said replacement parent component is removed if any of said child components of said parent component exceed said threshold value for service action, and said parent component is reinstalled. ~~wherein said instructions are further configured for modifying a parent/child relationship in association with at least one high frequency service item further comprises configuring said parent/child relationship in association with said at least one high frequency service item utilizing an XML based file.~~

19. (Previously Presented) The system of claim 18 wherein said instructions are further configured for providing a hierarchical structure; and

expressing via said hierarchical structure a relationship and a servicing function associated with said at least one high frequency service item utilizing a related component indicator and a counter.

20. (Currently Amended) A non-transitory computer-usable medium for managing high frequency service items associated with a rendering device, said computer-usable medium embodying computer program code, said computer program code comprising computer executable instructions configured for:

configuring a parent/child relationship in association with at least one high frequency service item utilizing an XML based computer system, wherein said at least one high frequency service item is associated with and a component of said rendering device, said parent/child relationship comprising a parent component associated with said rendering device and at least one child component comprising at least one sub-part of said parent component wherein said parent component is customer replaceable;

storing a preset number of total images for said at least one high frequency service item and at least one threshold value associate with said at least one high frequency service item in a memory device integrated in said at least one high frequency service item;

monitoring a status of said at least one high frequency service item with respect to ~~a~~ said at least one threshold value with a high frequency service interval monitor integrated in said high frequency service item;

updating said XML based computer system by a remote service provider when said parent/child relationship changes;

displaying a hierarchical structure illustrative of said parent/child relationships in a graphical user interface provided by said high frequency service interval monitor on a display associated with said rendering device;

activating a parent component indicator on said rendering device when said at least one threshold value is reached;

performing a service action on said at least one child component when a service threshold for said child component is exceeded ~~associated with said parent component in order to retain life of said parent component~~; and

replacing said parent component if said at least one child component ~~associated with said high frequency service item~~ exceeds a ~~said~~ threshold value for said service action thereby maximizing a utilization of said at least one high frequency service item and a reliability with respect to said device.

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NOTICE OF ALLOWANCE AND FEE(S) DUE

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Xerox Corporation
c/o ORTIZ & LOPEZ, PLLC
P. O. BOX 4484
ALBUQUERQUE, NM 87196-4484

EXAMINER	
FISHER, PAUL R	
ART UNIT	PAPER NUMBER
3689	

DATE MAILED: 07/03/2017

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/429,775	04/24/2009	Joanna Brown	20081779-US-NP	1703

TITLE OF INVENTION: METHOD AND SYSTEM FOR MANAGING SERVICE INTERVALS FOR RELATED COMPONENTS

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	$960	$0	$0	$960	10/03/2017

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the ENTITY STATUS shown above. If the ENTITY STATUS is shown as SMALL or MICRO, verify whether entitlement to that entity status still applies.

If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.

If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".

For purposes of this notice, small entity fees are 1/2 the amount of undiscounted fees, and micro entity fees are 1/2 the amount of small entity fees.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail **Mail Stop ISSUE FEE**
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

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ALBUQUERQUE, NM 87196-4484

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission
I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

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nonprovisional	UNDISCOUNTED	$960	$0	$0	$960	10/03/2017

EXAMINER	ART UNIT	CLASS-SUBCLASS
FISHER, PAUL R	3689	705-305000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).
- ❑ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ❑ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list
(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,
(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.
1 _____
2 _____
3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ❑ Individual ❑ Corporation or other private group entity ❑ Government

4a. The following fee(s) are submitted:
- ❑ Issue Fee
- ❑ Publication Fee (No small entity discount permitted)
- ❑ Advance Order - # of Copies _____

4b. Payment of Fee(s): **(Please first reapply any previously paid issue fee shown above)**
- ❑ A check is enclosed.
- ❑ Payment by credit card. Form PTO-2038 is attached.
- ❑ The director is hereby authorized to charge the required fee(s), any deficiency, or credits any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)
- ❑ Applicant certifying micro entity status. See 37 CFR 1.29 — NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.
- ❑ Applicant asserting small entity status. See 37 CFR 1.27 — NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.
- ❑ Applicant changing to regular undiscounted fee status. — NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____

PTOL-85 Part B (10-13) Approved for use through 10/31/2013. OMB 0651-0033 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

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Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)

(Applications filed on or after May 29, 2000)

The Office has discontinued providing a Patent Term Adjustment (PTA) calculation with the Notice of Allowance.

Section 1(h)(2) of the AIA Technical Corrections Act amended 35 U.S.C. 154(b)(3)(B)(i) to eliminate the requirement that the Office provide a patent term adjustment determination with the notice of allowance. See Revisions to Patent Term Adjustment, 78 Fed. Reg. 19416, 19417 (Apr. 1, 2013). Therefore, the Office is no longer providing an initial patent term adjustment determination with the notice of allowance. The Office will continue to provide a patent term adjustment determination with the Issue Notification Letter that is mailed to applicant approximately three weeks prior to the issue date of the patent, and will include the patent term adjustment on the patent. Any request for reconsideration of the patent term adjustment determination (or reinstatement of patent term adjustment) should follow the process outlined in 37 CFR 1.705.

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

OMB Clearance and PRA Burden Statement for PTOL-85 Part B

The Paperwork Reduction Act (PRA) of 1995 requires Federal agencies to obtain Office of Management and Budget approval before requesting most types of information from the public. When OMB approves an agency request to collect information from the public, OMB (i) provides a valid OMB Control Number and expiration date for the agency to display on the instrument that will be used to collect the information and (ii) requires the agency to inform the public about the OMB Control Number's legal significance in accordance with 5 CFR 1320.5(b).

The information collected by PTOL-85 Part B is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450. Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Notice of Allowability	Application No. 12/429,775	Applicant(s) BROWN ET AL.	
	Examiner PAUL R. FISHER	Art Unit 3689	AIA (First Inventor to File) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *Amendments and Arguments filed with RCE dated 5/3/2016*.
   ☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on_____.
2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.
3. ☒ The allowed claim(s) is/are *1-20*. As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   Certified copies:

   a) ☐ All b) ☐ Some *c) ☐ None of the:
   1. ☐ Certified copies of the priority documents have been received.
   2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
   3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
4. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
5. ☐ Examiner's Amendment/Comment
6. ☒ Examiner's Statement of Reasons for Allowance
7. ☐ Other _____.

/PAUL R FISHER/
Primary Examiner, Art Unit 3689

DETAILED ACTION

1. The Request for Continued Examination filed on May 3, 2016 has been acknowledged. Claims 1-20, as amended, are currently pending and have been considered below.

Notice of Pre-AIA or AIA Status

2. The present application is being examined under the pre-AIA first to invent provisions.

Continued Examination Under 37 CFR 1.114

3. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on May 3, 2016 has been entered.

Allowable Subject Matter

4. Claims 1-20 are allowed.

5. The following is an examiner's statement of reasons for allowance: The art of record fails to explicitly teach the combination of elements as currently claimed. Specifically that "updating said XML based computer system by a remote service

provider connected to said XML based computer system over a wireless communication channel when said parent/child relationship changes; displaying a hierarchical structure illustrative of said parent/child relationships in a graphical user interface provided by said high frequency service interval monitor on a display associated with said rendering device; activating a parent component indicator on said rendering device when said at least one threshold value is reached; performing a service action on said at least one child component when a service threshold for said child component is exceeded; and replacing said parent component if said at least one child component exceeds a threshold value for said service action, thereby maximizing a utilization of said at least one high frequency service item and a reliability with respect to said rendering device." As now explicitly claimed the system remotely updates the XML computer based system and through this wireless updating the relationships can be monitored which effects the utilization of the device. As such the combination of elements maximizes the utilization of the service items and improves over what is stated in the art. The art of record fails to show this combination of elements and as such the claims stand allowed over the prior art.

6. The 101 rejection has been withdrawn as the claims are directed toward a computer centric implementation of asset monitoring which results in active maintenance and the maximization of the monitored elements. Similar to Enfish these limitations improve over the field of remote maintenance monitoring by applying this unique combination of elements to maximize the utilization of the equipment.

7. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PAUL R. FISHER whose telephone number is (571)270-5097. The examiner can normally be reached on Mon/Fri [8am/4:30pm].

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at http://www.uspto.gov/interviewpractice.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Janice Mooneyham can be reached on (571) 272-6805. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/PAUL R FISHER/
Primary Examiner, Art Unit 3689
6/22/17