

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

R-PAC INTERNATIONAL CORPORATION,
Petitioner,

v.

ADASA INC,
Patent Owner.

IPR2024-01416
Reexamination Patent 9,798,967 B2

Before BRIAN J. McNAMARA, DEVON ZASTROW NEWMAN, and
MICHAEL T. CYGAN, *Administrative Patent Judges*.

NEWMAN, *Administrative Patent Judge*.

DECISION
Denying Institution of *Inter Partes* Review
35 U.S.C. §§ 314(a), 325(d)

I. INTRODUCTION

A. *Background and Summary*

R-pac International Corporation (“Petitioner”) filed a Petition (Paper 2, “Pet.”) requesting institution of *inter partes* review of claims 1–20 (“the challenged claims”) of U.S. Reexamination Patent No 9,798,967 B2 (Exhs. 1001 (patent issued October 24, 2017), 1002 (*ex parte* reexamination 11358th), “the ’967 patent”). ADASA Inc. (“Patent Owner”), filed Petitioner’s Preliminary Reply to Patent Owner’s Preliminary Response (Paper 9, “Prelim. Resp.”) No additional briefing was permitted. *See* Ex. 3001.

We have jurisdiction pursuant to 35 U.S.C. § 6. For the reasons set forth below, we exercise our discretion under 35 U.S.C. § 325(d), and deny institution of an *inter partes* review.

B. *Real Parties in Interest*

Petitioner and Patent Owner identify themselves as the real parties-in-interest. Pet. 70; Paper 5, 2 (Mandatory Notices).

C. *Related Matters*

The parties identify *ADASA Inc. v. R-Pac International LLC*, No. 1:2024-cv-06102 (S.D.N.Y.) as a related litigation. Pet. 71; Paper 5, 2 (Mandatory Notices). Patent Owner identifies the following additional related matters: *ADASA Inc. v. CCL Industries Inc.*, Civil Action No. 2:24-CV-08409, currently pending in the District of New Jersey; *ADASA Inc. v. SML Intelligent Inventory Solutions LLC and SML (US) Inc.*, Civil Action No. 4:24-CV-370, pending in the Eastern District of Texas; *ADASA Inc. v. Avery Dennison Corp.*, Civil Action No.: 6:17-CV-01685-MK, filed in the District of Oregon, Eugene Division, now closed; *ADASA Inc. v. Avery*

Dennison Corp., Case No. 22- 1092, appeal to Federal Circuit Court of Appeals, now closed; and *Ex Parte* Reexamination No. 90/014,052, filed with the U.S. Patent and Trademark Office on November 29, 2017, now closed. Paper 5, 2–3.

We note that the ’967 patent has been separately challenged in IPR2025-00125.

D. The ’967 Patent

On appeal from the patent litigation in the U.S District Court of Oregon, the Federal Circuit described the ’967 disclosure as follows, which we adopt for purposes of this decision:

The ’967 patent relates, in part, to methods and systems for commissioning radio-frequency identification (RFID) transponders. ’967 patent at 3:27–32. RFID transponders, also known as RFID tags, are used, like barcodes, to identify and track objects by encoding data electronically in a compact label. *Id.* at 1:32–34. But unlike traditional barcodes, RFID tags need not include external, machine-or human-readable labels and can communicate the data they encode over a distance using radio-frequency transmission. *Id.* at 1:34–53, 6:28–59.

To facilitate identifying and tracking an object in the stream of commerce, RFID tags are encoded with information associated with the object through a process known as “commissioning.” *Id.* at 1:40–53. The encoded data may include various categories of information, “for example, data representing an object identifier, the date-code, batch, customer name, origin, destination, quantity,” etc. *Id.* at 1:45–50. Regardless of the specific categories included, to ensure accurate tracking, it is critical that the data uniquely identify the tagged object. *Id.* at 2:21–22, 2:48–50.

In the RFID industry, uniqueness is ensured by assigning RFID tags an Electronic Product Code (EPC or EPCglobal) in accordance with certain global formatting standards. An EPC

is a serialized object number comprising object class information and a serial number that together uniquely identify the associated object. *See id.* at 9:7–15. For example, the EPC may be a Serialized Global Trade Item Number (SGTIN), which consists of a Global Trade Item Number identifying the brand and class of the item (i.e., object class information) followed by a serial number uniquely identifying the tagged item within the brand and class. *Id.* Since objects from the same brand and class will share the same object class information, ensuring the uniqueness of the overall EPC amounts to ensuring uniqueness of the serial number.

Ensuring uniqueness, however, is not necessarily straightforward. *Id.* at 2:49–50. Serialization generally “requires a central issuing authority of numbers for manufacturers, products, and items to guarantee uniqueness and to avoid duplication of numbers.” *Id.* at 2:23–25. The issuing authority assigns blocks of numbers to remote locations, wherein each remote location receives the numbers one by one or where the numbering space is partitioned in some manner. *Id.* at 2:25–29. But, in either case, the encoded numbers must generally be reconciled by comparison to a central database “either one or several numbers at a time.” *Id.* at 2:30–32.

In the case of EPCglobal numbers, the central issuing authority is known as GS1. *Id.* at 7:61–65, 9:7–15. GS1 distributes blocks of numbers to member companies in a hierarchical manner, wherein each company is authorized to then “further allocate numbers from its upper level database to as many lower database levels as it deems necessary to distribute number authority throughout its enterprise.” *Id.* at 7:61–8:3. Using central databases to distribute the allocated numbers has certain drawbacks. It generally requires encoders to maintain a continuous network connection with the database so that new serial numbers can be retrieved when an RFID tag is commissioned. *See id.* at 3:27–4:4. But a continuous connection is not always possible and, even when it is, may be plagued by network delays that slow down the commissioning process. *See id.* at 3:64–4:4. This in turn may delay or impair

downstream activity, including manual steps in the commissioning or distribution process. *Id.*

The '967 patent seeks to “overcome[] these shortcomings” using systems and methods for commissioning RFID tags “on-demand” and “with no external authorizations or queries required on a transponder-by- transponder basis,” enabling commissioning to proceed without the need for continuous connectivity to a central database. *Id.* at 3:27–35, 3:64–67. In one embodiment, pre-authorized ranges of serial numbers for specific object classes are allocated to lower levels in the hierarchy, for example, individual encoders. *Id.* at 8:4–11. In this embodiment, the object class serial number space is subdivided into sectors defined by a series of fixed “Most Significant Bits” (MSBs), wherein the number of allocatable sectors is determined by the number of MSBs. *Id.* at 8:11–15. For example, according to the SGTIN-96 standard, the serial number space consists of 38 bits which can encode 2^{38} distinct serial numbers. If the first 14 of these bits are designated as MSBs, then the serial number space is correspondingly subdivided into 2^{14} sectors or “blocks” which can be allocated to as many as 2^{14} different encoders. *See id.* at 8:21–29. The remaining 24 bits can then be used to encode a unique serial number space within a given block. *Id.*

See Ex. 1012 (Adasa Inc. v. Avery Dennison Corp., 55 F.4th 900 (Fed. Cir. 2022)), 5–6.

E. Illustrative Claims

Independent claims 1 and 16 are representative of the challenged subject matter and are reproduced below with bracketed labels employed by Petitioner to facilitate analysis and discussion.

1[pre] An RFID transponder comprising:

1[a] a substrate;

1[b] an antenna structure formed on the substrate; and

1[c] an RFID integrated circuit chip which is electrically coupled to the antenna structure,

1[d] wherein the RFID integrated circuit chip is encoded with a unique object number, the unique object number comprising an object class information space and a unique serial number space,

1[e] wherein the unique serial number space is encoded with one serial number instance from an allocated block of serial numbers, the allocated block being assigned a limited number of most significant bits,

1[f] wherein the unique serial number space comprises the limited number of most significant bits uniquely corresponding to the limited number of most significant bits of the allocated block and of remaining bits of lesser significance that together comprise the one serial number instance.

16[pre]: An integrated circuit, comprising:

16[a]: a radio frequency circuit configured to backscatter a return link signal for processing by an RFID interrogator;

16[b]: control logic; and

16[c]: a memory,

16[d]: wherein the memory is configured with a unique object number space, the unique object number space comprising an object class information space and a unique serial number space,

16[e]: wherein the unique serial number space is encoded with one serial number instance from an allocated block of serial numbers, the allocated block being assigned a limited number of most significant bits, and

16[f]: wherein the unique serial number space comprises the limited number of most significant bits uniquely corresponding to the limited number of most significant bits of the allocated block and remaining bits of lesser significance that together comprise the one serial number instance.

Ex. 1002, 1:21–39; 2:19–38.

Independent claim 13 contains the same limitations as claim 1 and further specifies that the RFID circuit chip is encoded with a global trade item number and that the unique serial number space “comprises at least 3 most significant bits uniquely corresponding to the limited number of most significant bits of the allocated block.” *Id.* at 2:1–18. The dependent claims specify further details about elements including encoding of the object class information space and the most significant bits and the substances comprising the RFID chip. Ex. 1001, 36:51–37:14; 37:33–38:4; 38:23–35.

F. Prior Art and Asserted Grounds

Petitioner asserts that claims 1–20 would have been unpatentable on the following grounds (*see* Pet. 2):

Claim(s) Challenged	35 U.S.C. §¹	Reference(s)/Basis
1, 6–12, 16, 20	103(a)	Dummies, ² Traub ³
2–5, 13–15, 17–19	103(a)	Dummies, Traub, TDS-2004 ⁴

Petitioner supports its allegations with the declaration of Thomas J. Clare (Ex. 1005, “Crane Decl.”).

¹ The Leahy-Smith America Invents Act (“AIA”) included revisions to 35 U.S.C. § 103 that became effective on March 16, 2013. Because the ’967 patent issued from an application that claims priority from an application filed before March 16, 2013, we apply the pre-AIA versions of the statutory bases for unpatentability.

² Patrick J. Sweeney II, RFID for Dummies (2005) (Ex. 1009, “Dummies”)

³ U.S. Patent 8,373,545 B2 (Ex. 1010, “Traub”)

⁴ EPC Tag Data Standards Version 1.1 Rev.1.24 (April 1, 2004) (Ex. 1011, “TDS-2004”)

G. Summary of Cited Prior Art

1. Dummies (Ex. 1009)

RFID for dummies (“Dummies”) is a reference “book that is on a mission to take the confusion out of RFID.” Ex. 1009, Introduction. Dummies discloses the components and basic function of an RFID system, a transponder, or “tag,” and a transceiver, or “reader.” *Id.* at 78. An RFID tag allows an object to have a unique identification among all other objects. *Id.* at 10. A centralized issuing authority, the EPCGlobal organization assigns each RFID tag an individual number, referred to as an electronic product code (EPC) where the tag is used to identify a product. *Id.* at 10, 239.

Figure 2-3 of Dummies, shown below, illustrates that an EPC “can be from 32 to 256 bits long” and has the following general structure:



Id. at 46–47. As shown in Figure 2-3, Dummies discloses that the “Header” indicates “what type of number follows,” the “EPC Manager Number...identifies the company or company entity,” the “object class [is] similar to a stock-keeping unit, or SKU,” and the “serial number...is the specific instance of the object class being tagged.” *Id.* The EPC is “written” onto the tag by being encoded in a tag’s memory using “an RFID label printer” or “reader” to write the data to the tag. *Id.* at 238.

Dummies discloses that an EPC relies on a “numbering hierarchy” to uniquely identify an item, using three numbers, the 1) manufacturer number

(EPC Manager), (2) the product number (object class), and (3) the serial number. *Id.* at 239. The EPC manufacturing number is unique to the manufacturer and assigned by the EPCGlobal organization, while the manufacturer “is free to assign a product number (also called an Object Class) to each of that member’s products. . . [and] assign a serial number to each item manufactured by that member.” *Id.*

Dummies discloses that because “[a]n always-accessible central numbering authority isn’t practical for many companies[,] these companies can use an intelligent hierarchy imposed on the serial number allocation to decentralize and make feasible the allocation of unique serial numbers across all manufacturing lines.” *Id.* Dummies suggests a “simple example of a decentralized, hierarchical approach to allocating serial numbers” as follows:

A range of serial numbers for each product is allocated to each manufacturing facility. Within a facility, a range of numbers from those allocated to the facility is allocated to each line producing a particular product. In this way, the serial number is effectively subdivided into a facility number, line number, and subserial number, in which the allocation hierarchy is maintained between facility number and line number.

Id. at 240.

2. *Traub (Ex. 1010)*

Traub is entitled “EPC Provisioning System Using Business Rules.” Ex. 1010, code (54). Traub discloses that an “RFID tag can include a unique electronic product code (EPC)” and “can emit a signal activating the RFID tag which then can reply with the EPC code.” *Id.* at 1:25–27. Traub discloses:

The EPCs currently can have either a 64- or 96-bit code numbering scheme, but additional versions can be supported in the future. The EPC includes sections that indicate the product and manufacturer of a given item as well as a section to uniquely identify an object. Currently, an EPC number can contain:

A Header, identifying the length, type, structure, version and generation of EPC

The Manager Number, which identifies the company or company entity

Object Class, similar to a Stock Keeping Unit or (SKU).

Id. at 1:28–38.

Figure 4B of Traub, reproduced below, depicts the serial number space as part of the EPC code:

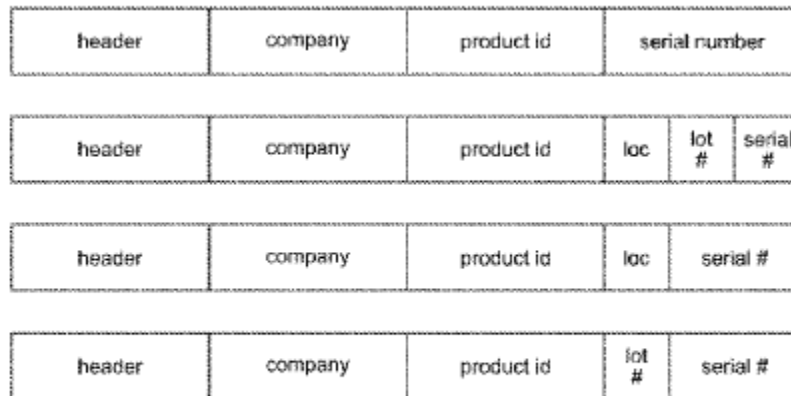


FIG. 4B

Traub’s Figure 4B, reproduced above, illustrates a “dynamic EPC providing system.” Traub 1:67.

Traub describes a system for provisioning RFID tags with serial numbers, in Figure 4A, reproduced below.

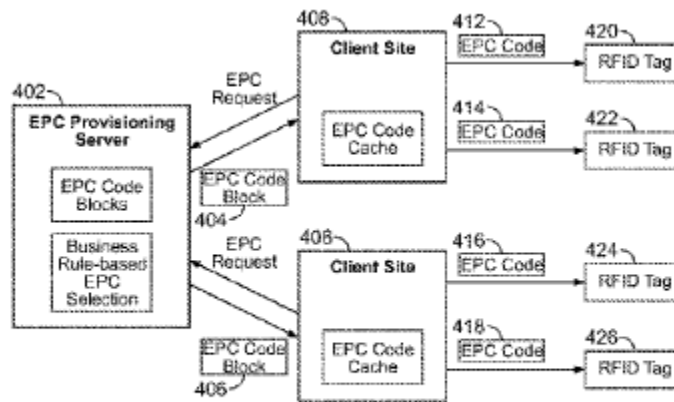


FIG. 4A

Traub’s Figure 4A, reproduced above, illustrates a “dynamic EPC providing system.” Traub 1:67. The EPC server “**402** can use business rules to determine the EPC codes for the multiple client sites **408** and **410**” which can be RFID edge servers. *Id.* at 4:2–5.

Traub discloses:

In one embodiment, the EPC server can create pools of EPC codes. The EPC codes can be created based on business policies that can be used to indicate business information in the EPC code. The RFID edge servers can obtain EPC codes from the pool, store these EPC codes into a local cache and then use these EPC codes in the construction of RFID tags, such as with an RFID tag printer. Unused RFID tags can be returned from the cache to the pool. The client sites 408 and 410 can be, or can include, RFID edge servers. The EPC server can use business rules to assign the EPC code blocks. The EPC code blocks can be assigned so as to indicate business information Such as lot number and/or location.

Id. at 3:40–52.

II. ANALYSIS

A. *Discretion Under 35 U.S.C. § 325(d)—Advanced Bionics Analysis*

Patent Owner contends that we should exercise our discretion under 35 U.S.C. § 325(d) to deny the Petition, applying our precedential decisions in *Advanced Bionics, LLC v. MED-EL Elektromedizinische Geräte GmbH*, IPR2019-01469, Paper 6 (PTAB Feb. 13, 2020) (precedential) (“*Advanced Bionics*”) and *Becton, Dickinson & Co. v. B. Braun Melsungen AG*, IPR2017-01586, Paper 8 (PTAB Dec. 15, 2017) (precedential as to § III.C.5, first paragraph) (“*Becton, Dickinson*”). Prelim. Resp. 20–24. For the reasons provided below, we exercise our discretion to deny institution under § 325(d).

1. *Applicable Framework*

Institution of *inter partes* review is discretionary. *See Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1367 (Fed. Cir. 2016) (“the PTO is permitted, but never compelled, to institute an IPR proceeding”). Section 325(d) provides that the Director may elect not to institute a proceeding if the challenge to the patent is based on matters previously presented to the Office. *Advanced Bionics, LLC v. MED-EL Elektromedizinische Geräte GmbH*, Case IPR2019-01469, Paper 6 (February 13, 2020) (precedential) (“*Advanced Bionics*”). “Previously presented art includes art made of record by the Examiner, and art provided to the Office by an applicant, such as on an Information Disclosure Statement (IDS), in the prosecution history of the challenged patent.” *Id.* at 7–8.

Advanced Bionics sets out a two-part framework for evaluating “whether the petition presents to the Office the same or substantially the

same art previously presented to the Office.” *Advanced Bionics* at 7.

Advanced Bionics’ two-part framework reads as follows:

- (1) whether the same or substantially the same art previously was presented to the Office or whether the same or substantially the same arguments previously were presented to the Office; and
- (2) if either condition of first part of the framework is satisfied, whether the petitioner has demonstrated that the Office erred in a manner material to the patentability of challenged claims.

Id. at 8.

In Part 1 of the *Advanced Bionics* two-part framework, we evaluate *Becton, Dickinson* factors (a), (b) and (d). *Advanced Bionics* at 10 (citing *Becton, Dickinson* at 17–18. If it is determined that the same or substantially the same art or arguments previously were presented to the Office, we then turn to Part 2 of *Advanced Bionics* framework. In Part 2, we evaluate *Becton, Dickinson* factors (c), (e) and (f).

Becton, Dickinson identifies the following non-exclusive factors:

- (a) the similarities and material differences between the asserted art and the prior art involved during examination;
- (b) the cumulative nature of the asserted art and the prior art evaluated during examination;
- (c) the extent to which the asserted art was evaluated during examination, including whether the prior art was the basis for rejection;
- (d) the extent of the overlap between the arguments made during examination and the manner in which Petitioner relies on the prior art or Patent Owner distinguishes the prior art;
- (e) whether Petitioner has pointed out sufficiently how the Examiner erred in its evaluation of the asserted prior art; and

(f) the extent to which additional evidence and facts presented in the Petition warrant reconsideration of prior art or arguments.

We analyze these factors below as they apply to the record in this proceeding, and find that, on balance, the factors weigh in favor of exercising our discretion under 35 U.S.C. § 325(d). We address the relevant parts of the prosecution history as they arise in the arguments.

2. *Analysis*

We begin by discussing part 1 of the *Advanced Bionics* framework, including whether the challenges advanced in the Petition raise the same or substantially the same prior art references or arguments previously presented to the Office. As part of that analysis, we look to the similarities, and material differences, between the asserted art and the prior art involved during examination and the cumulative nature of the asserted art and the prior art evaluated during examination, and whether the challenges set forth in the Petition raise the same or substantially the same arguments previously presented to the Office.

Second, we turn to part 2 of the *Advanced Bionics* framework, where we address whether Petitioner establishes sufficiently that the Office erred in its previous assessment of the prior art or arguments in a manner material to the patentability of the challenged claims. Within this discussion, we address the relevant prosecution history of the '967 patent.

3. *Advanced Bionics, Part 1 (factors a, b, d)*

Petitioner does not dispute that both Dummies and Traub previously were presented to the Office, but argues that we should not exercise our discretion under part 1 for three reasons: 1) because “only five pages of Dummies was submitted by the applicant during prosecution, and no claims were rejected based on it”; 2) “although Traub was considered during

reexam proceedings, the combination of Dummies and Traub was not”; and 3) because neither reference has been “considered in a Final Written Decision of an IPR on substantially similar claims” and the ’967 patent has not previously been subject to an IPR. Pet. 69–70.

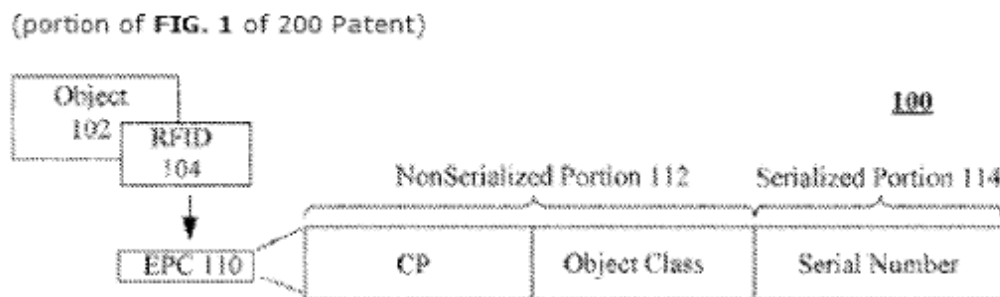
With regard to Petitioner’s first argument, Patent Owner responds that the portions of Dummies submitted to the Patent Office contained all of the excerpts relevant to the Petitioner’s allegations of unpatentability regarding the limitations Patent Owner challenges as unproven by the teachings of the asserted references. *See* Prelim. Resp. 21–22 (citing Petitioner’s allegations at Pet. 38–47 “(addressed to Limitations 1[e]–[f]⁵)”). Patent Owner argues that the remaining citations to Dummies in the Petition are “addressed to known and duplicative background information” that is acknowledged by Petitioner’s declarant as disclosing aspects well known in the art at the time of the invention. *See id.* at 21–22 (citing Ex. 1005 (Crane Decl.) ¶¶ 57, 75; Ex. 2002 (former litigation trial transcript of testimony of Dummies chapter author, Daniel Orman), 733:8–15). Patent Owner further argues that Petitioner’s case for invalidity based on the Dummies-Traub combination as related to limitations [e]–[f] “makes only passing reference to [Dummies] before pivoting to Traub as purportedly teaching these limitations.” Prelim. Resp. 22 (citing Pet. at 38–47, 57, 63).

⁵ In its Preliminary Response, Patent Owner’s only substantive argument against unpatentability alleges that the combination of Dummies and Traub fails to teach limitations [e] and [f], which are common to independent claims 1, 13, and 16 (referred to hereafter as “limitations [e]–[f]”). *See* Prelim. Resp. 42–56. Thus, we confine our analysis herein to Petitioner’s cited teachings of these disputed limitations.

We find Patent Owner’s arguments regarding argument 1 persuasive as Dummies was considered by the Office during Examination, as Petitioner acknowledges (*see* Pet. 8, 69 (citing Ex. 1003 (Examination history) 221)), and the allegations related to Dummies’ disclosure of hierarchical structure as relevant to limitations [e] and [f] are cumulative of references cited during reexamination. For instance, during reexamination, the Examiner cited the “200 Patent”⁶ for the following teachings:

However, 200 Patent teaches a system . . . including an RFID tag 104 with a unique object number (i.e., an Electronic Product Code [EPC] identifier 110; Figure 1; column 1, lines 12-46; and column 3, lines 19-29). 200 Patent further teaches that the unique object number comprises an object class information space (i.e., Object Class in Non Serialized Portion 112) and a unique serial number space (i.e., Serial Number in Serialized Portion 114; Figure 1; column 3, lines 56-67; and column 4, lines 1-12).

Ex. 1004, 55. The Examiner copied a portion of Figure 1 of the 200 patent into the rejection, as reproduced below.



Id. Figure 1 depicts the EPC as having a non-serialized portion representing an object class and a serialized portion representing a serial number. *Id.*

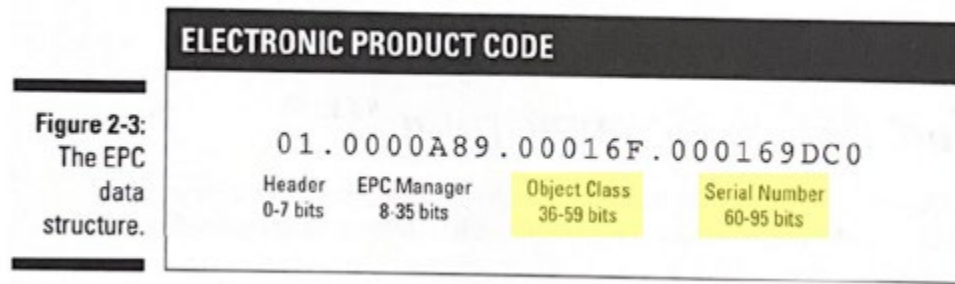
⁶ US 7,827,200 B2 to Rowe.

In addition, the Examiner found that the

200 Patent further teaches that the unique serial number space is encoded with one serial number instance from an allocated block of serial numbers, the allocated block being assigned a limited number of most significant bits, and wherein the unique serial number space comprises the limited number of most significant bits corresponding to the allocated block and remaining bits of lesser significance that together comprise the one serial number instance. More specifically, 200 Patent teaches that for example, 25 bits can be allocated to the serial number (column 6, lines 3-8).

Ex. 1004, 55–56.

We find this information to be cumulative of what Petitioner has argued Dummies discloses as relevant to limitations [e] and [f]: an RFID tag having a hierarchical structure with a unique object number (EPC) identifier encoded with one serial number instance, that the EPC's one serial number instance is from an allocated block of numbers, and that the limited number of most significant bits corresponding to the allocated block and remaining bits of lesser significance together comprise the one serial number instance encoded in the unique serial number space. *See* Pet. 38–39 (limitation [e], 45 (limitation [f])). In particular, Figure 1 of the 200 Patent is structurally cumulative to Figure 2-3 of Dummies, reproduced below, which Petitioner alleges “discloses the EPC stored in tag memory includes a space for object class information and a space for a unique serial number, with object class occupying bits 36-59 and the serial number occupying bits 60-95.”



Pet. 36–37 (color annotations original to Petition). Figure 2-3 of Dummies, shown above, depicts an Electronic Product Code (EPC) data structure. Dummies, 46. The 200 Patent also describes the concept of an “EPC built around a basic hierarchical idea that can be used to express a wide variety of different, existing numbering systems.” *See* Ex. 1004 (Reexamination history), 361 (200 Patent 3:34–36).

Dummies is also relied upon for teaching “[a] range of serial numbers for each product is allocated to each manufacturing facility.” Pet. 38 (citing Ex. 1005 ¶ 111; Dummies, 239–240). The 200 Patent discussed cumulative teachings of dividing a serial number into manufacturer subsections:

“In one embodiment, different manufacturer divisions that produce objects having the same object classification can be assigned a subset of numbers from a number pool of unassigned numbers to ensure that unique serial numbers are always generated In another example, a first division can assign serial numbers in the range of one to a million and a second division can assign serial numbers in a range of three to four million.”

Ex. 1004, 55–56. Accordingly, the teachings of the 200 Patent are cumulative to those proffered by Petitioner regarding Dummies.

We further agree with Patent Owner that the record reflects that Petitioner and its declarant rely primarily on Traub’s teachings in the

allegations of unpatentability of limitations [e]–[f]. *See* Pet. 38–47 (citing Ex. 1005 (Clare Decl. ¶¶ 109–131)). Because Petitioner’s reliance is most heavily placed on Traub, which was substantively addressed and overcome during reexamination, and because Dummies’ teachings are cumulative to others considered during reexamination, we are unpersuaded that the combined teachings of Dummies and Traub present any new disclosure not cumulative to the references considered in reexamination.

Regarding Petitioner’s argument that neither Dummies or Traub has been addressed in a Final Written Decision of an IPR on “substantially similar claims” and that the ’967 patent has not previously been subject to an IPR, we do not find either reason persuasive under factors (a), (c), or (d) of *Becton, Dickinson*, which all relate to consideration by the Office during examination proceedings and not by the Board. *See Becton, Dickinson* at 17–18.

In sum, because both references Petitioner relies on were previously presented to the Office, or are cumulative to references that were before the Office, we conclude that the “same or substantially the same prior art or arguments previously were presented to the Office,” and proceed to part 2 of the *Advanced Bionics* framework.

4. *Advanced Bionics part 2 (factors c, e, f)*

In part 2, we turn to whether Petitioner demonstrates that the Office erred in a manner material to the patentability of the challenged claims. *Advanced Bionics*, Paper 6 at 8, 10; *see Becton, Dickinson*, Paper 8 at 24. We conclude that Petitioner has failed to do so.

Petitioner argues that the Patent Office erred in a manner material to the patentability of the challenged claims by 1) not considering the

Dummies-Traub combination and thereby “overlooked or misapprehended the references’ combined teachings”; 2) the Examiner in the original prosecution did not issue a rejection based on Dummies, where Dummies illustrates teachings impacting patentability; and 3) the Examiner erred by overlooking Traub’s teachings, including Figure 4B, as they impact patentability. Pet. 70.

With regard to arguments 1 and 2, our analysis is the same as above with respect to Dummies, which was considered by the Examiner during prosecution and is cumulative to references that were considered by the Examiner during reexamination with regard to the disputed limitations. As to the combination of Dummies and Traub, we are not persuaded that the Examiner erred in not issuing a rejection based on this combination as Petitioner has not identified any new disclosure not cumulative to the references considered in reexamination such that any teachings were overlooked, or explained how any such teachings were misapprehended.

Finally, we address Petitioner’s third argument, that the Examiner erred by overlooking Traub’s teachings, including Figure 4B. *See* Pet. 70. Petitioner acknowledges, in its brief overview of the reexamination history of the application leading to the ’967 Patent, that Traub was one of four references on which reexamination was ordered, and the basis of two of the four rejections of all pending claims in two separate office actions, including the action issued prior to allowance. *Id.* at 9–11 (citing Ex. 1004 (Re-examination history) 52, 56, 149, 328–451. Petitioner does not substantively address the rejections based on Traub in this recitation, but notes that Patent Owner amended the independent claims to overcome the rejections. *See* Pet. 10.

Petitioner's allegations regarding the Office's error with respect to Traub are: "For Traub, the Examiner in reexam overlooked Traub's teachings applied here that impact the Challenged Claims' patentability. For example, the reexam examiner did not discuss Traub's Figure 4B. *Compare* EX-1004, 67-77, with §X(A)(2)(f)." Pet. 70.

Patent Owner responds that the teachings of Traub cited by Petitioner were considered during the reexamination, including in connection with an earlier version of TDS-2004 (alleged in Petitioner's obviousness Ground 2). *See* Prelim. Resp. 22. Patent Owner argues that Petitioner "fails to identify any error in the prior consideration of the art and argument re-raised in the Petition, let alone material error" and that Petitioner's criticism is merely disagreeing with the reexamination outcome. *Id.* at 22–23.

To begin, none of Petitioner's cursory overview of the two reexamination rejections based on Traub, Petitioner's statement of error, or Petitioner's incorporation of its earlier analysis of obviousness allegations based on Traub are adequate substitutes for the required showings under *Becton, Dickinson* factors (e) and (f), requiring Petitioner to articulate

(c) the extent to which the asserted art was evaluated during examination, including whether the prior art was the basis for rejection;

(e) whether Petitioner has pointed out sufficiently how the Examiner erred in its evaluation of the asserted prior art; and

(f) the extent to which additional evidence and facts presented in the petition warrant reconsideration of prior art or arguments

See Advanced Bionics at 10 (citing *Becton, Dickinson* at 17–18).⁷

⁷ Petitioner requested authorization to file a preliminary reply addressing Section 325(d) issues raised by Patent Owner, alleging it

To the extent Petitioner argues, by referencing its obviousness grounds, that the relative strength of the grounds stated in the Petition, standing alone, supports a finding of material examiner error, that argument is not developed adequately and, therefore, is unpersuasive on this record. *See* Pet. 69–70. Petitioner bears the burden of showing that the Office erred, for example, by

could not have anticipated Patent Owner’s specific arguments and should have a fair opportunity to address them. In particular, Petitioner could not have anticipated Patent Owner’s specific argument that the Dummies-Traub combination was considered in the original examination or the reexamination of the patent or, more specifically, that even if Dummies was not expressly considered during the original prosecution, it is redundant of prior art that was considered.

See Ex. 3001 (Petitioner’s email request).

We denied Petitioner’s request for additional briefing for lack of good cause for two reasons: 1) With regard to disputed limitations [e] and [f], Petitioner’s declarant opined that teachings solely conveyed by Dummies’ disclosures were within the knowledge of one of skill in the art at the time of the invention, making Petitioner’s alleged failure to anticipate an argument that Dummies’ teachings were “redundant of prior art that was considered” irrelevant as their widely-known nature was advocated by Petitioner. *See, e.g.,* Ex. 1005 (Declaration of Thomas Clare) ¶¶ 113–115. Nevertheless, based on Petitioner’s allegations of obviousness of limitations [e] and [f], our finding on this issue relates to Petitioner’s inadequate demonstration of the Examiner’s material error with respect to Traub, which Patent Owner stated as “Petitioner fails to identify any error in the prior consideration of the art and argument re-raised in the Petition, let alone material error” and “ignores that the exact portions of Traub that the Petition relies upon, and more, were previously presented during the reexam and rejected.” *See* Prelim. Resp. 22–23. Given that Petitioner summarized the Reexamination file history in its Petition, and acknowledged these facts about the Office’s consideration of Traub in its Petition, we were not persuaded that Patent Owner’s response was unanticipated, and denied briefing on that basis.

“misapprehending or overlooking specific teachings of the relevant prior art whose teachings impact patentability of the challenged claims.” *Advanced Bionics*, Paper 6 at 8. Where “the record of the Office’s previous consideration of the art is not well developed or silent, then a petitioner may show the Office erred by overlooking something persuasive under” *Becton, Dickinson* factors (e) and (f). *Advanced Bionics*, Paper 6 at 10. As explained above, when assessing factor (e), we consider whether Petitioner “point[s] out sufficiently how the examiner erred in its evaluation of the asserted prior art.” *Supra* 13. When assessing factor (f), in turn, we look for some explanation of how or why “the extent to which additional evidence and facts presented in the petition warrant reconsideration of the prior art or arguments.” *Id.* at 14. Petitioner addresses neither of those issues adequately. Pet. 69–70. However, for completeness, we explain why we disagree with Petitioner that Traub was not substantively addressed during reexamination, including by failing to cite Traub Figure 4B.

Traub, *including Figure 4B*, is cited against each pending independent claim in the reexamination file history. *See* Ex. 1004 (Reexamination file history) 69–72, 74–76, 78–80, 163–165, 168–169, 172–174). In the first and most extensive citation, the Examiner made the following findings:

However, 545 Patent [Traub] teaches a system that is related to the one disclosed by 684 Publication, including an RFID tag with a unique object number (i.e., RFID tags 420-426 with EPC codes 412-418; Figure 4A; column 1, lines 20-38; column 3, lines 34-39). 545 Patent further teaches that the unique object number comprises an object class information space (including a Stock Keeping Unit [SKU] or “product id” in an EPC code as shown in Figure 4B; column 1, lines 32-38)

and a unique serial number space (i.e., “serial number” in an EPC code as shown in Figure 4B).

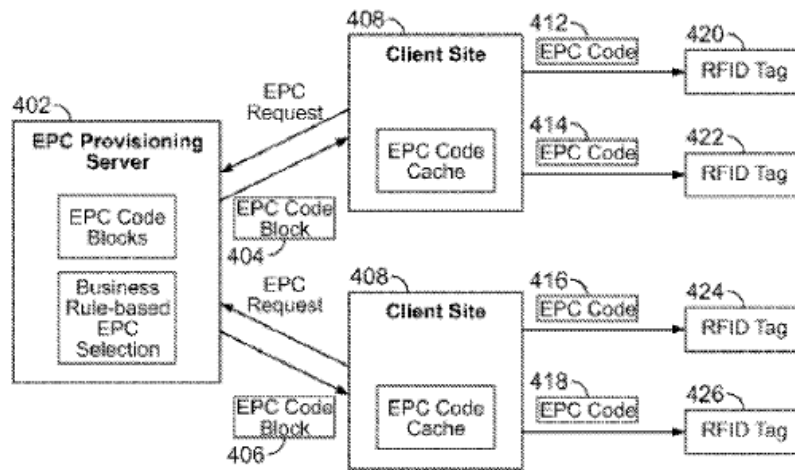


FIG. 4A (545 Patent)

(and portion of FIG. 4B)

header	company	product id	serial number
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545 Patent further teaches that the unique serial number space is encoded with one serial number instance from an allocated block of serial numbers, the allocated block being assigned a limited number of most significant bits, and wherein the unique serial number space comprises at least 3 most significant bits corresponding to the allocated block. More specifically, 545 Patent teaches that EPC server 402 dynamically provides EPC code blocks 404 and 406 to multiple client sites 408 that encode EPC codes from the blocks onto the RFID tags (Figure 4A; column 3, lines 34-39; and column 4, lines 5-12). 545 Patent further teaches that for example, 45 million total available EPC codes can be divided into blocks or pools of about five or ten million EPC codes (e.g., from ten to fifteen million or from 30 to 40 million; Figures 13E-G).

It would be well understood in the art that a 45 million serial numbers would require 26 bits in binary and a block of one million serial numbers would require 20 bits in binary. In a serial number space having a total of 26 bits (such as taught by 545 Patent), a block of numbers from Oto about 1,000,000

(decimal) would be expressed as binary numbers 00000000000000000000000000000000 to about 00000011111111111111111111111111. An exemplary block of numbers from about 10,000,000 to about 15,000,000 (decimal) would be expressed as binary numbers from about 00101000000000000000000000000000 to about 00111100000000000000000000000000. Another exemplary block of numbers from about 30,000,000 to about 40,000,000 (decimal) would be expressed as binary numbers from about 01110000000000000000000000000000 to about 10100000000000000000000000000000. Therefore, 545 Patent teaches that an allocated block or range of serial numbers is assigned a limited number of most significant bits (e.g., when the serial number space has 26 bits in all, the six most significant bits, e.g., "000000," "001010," etc., correspond to a particular block containing over a million serial numbers and therefore correspond to a particular client site as taught by 545 Patent). 545 Patent further teaches that wherein the unique serial number space comprises at least 3 most significant bits corresponding to the allocated block (e.g., six most significant bits in the example above).

Regarding claim 1, it would have been obvious to a person of ordinary skill in the art to provide a unique serial number space encoded with one serial number instance from an allocated block of serial numbers as taught by 545 Patent, in the RFID transponder disclosed by 684 Publication, in order to advantageously ensure that unique serial numbers are generated even for objects that have the same object classification but are produced at different client sites as taught by 545 Patent.

Ex. 1004 (Reexamination file history), 69–72. In the excerpt above, Figure 4A and a portion of Figure 4B are reproduced,⁸ which depict “dynamic EPC providing systems.” *See* Traub at 1:67.

⁸ We do not find the Examiner’s inclusion of only a portion of Traub Figure 4B to affect our analysis because the same concept advocated by Petitioner’s declarant regarding Traub’s teachings was advocated by the Examiner. *Compare* Ex. 1005 (Clare Decl.) ¶¶ 118–121 to the Examiner’s analysis at

Following this rejection, Patent Owner (then Applicant), met with the Examiner to discuss the application that led to the '967 patent. *See* Ex. 1004, 21–22 (“AGENDA for 90/014,052 INTERVIEW”). Applicant asked to discuss examples provided by the Examiner that the Examiner asserted taught the principles of using the most significant bits in a tag. *Id.* at 55–57. The Examiner found:

It would be well understood in the art that a block of one million serial numbers would require at least 20 bits in binary, and that in a serial number space having a total of 25 bits (such as taught by 200 Patent), a first block of numbers from “one to a million” would be expressed as 25-bit binary numbers 000000000000000000000001 to about 000001111111111111111111. A different block of numbers in a range of about “three to four million” can be expressed as binary numbers 000110000000000000000000 to 000111111111111111111111, for example.

Id. at 56.

In the proposed interview agenda, Applicant stated the following:

The Patentee would like to demonstrate that the examples do not teach the general principle of using the most significant bits in a tag.

Example used: another block assigned to a second manufacturing division can be 3,456,789 (i.e., “a number in the range three to four million”), represented as 0001101001011111100010101.

Now instead, choose a second number from the same range three to four million 3,056,789 represented as 0001011101010010010010101 having a different value for the

Ex. 1004, 69–72, above. To the extent Petitioner disagrees, it failed to “point[s] out sufficiently how the examiner erred in its evaluation of the asserted prior art.” *Advanced Bionics*, Paper 6 at 10.

five MSBs. This would produce an invalid outcome for a brand owner using the most significant bits to allocate blocks, so therefore it would not have been obvious to use MSBs to allocate blocks of serial numbers.

Furthermore, a third number 4,056,789, a number in the range four to five million represented as 0001111011110011011010101 has 00011 as its most significant bits. This 5-bit number exactly matches the five MSB's from the Examiner's first example above (i.e. 3,456,789). Therefore using the MSBs to allocate blocks would result in duplication of serial numbers, which violates the requirements for uniquely numbered EPC RFID tags as set for in the EPCglobal Tag Data Standard. It would therefore have been obvious to one having ordinary skill in the art to NOT mix binary block allocation with decimal block allocation. This is what our expert, in speaking to others skilled in the art, correctly describes as mixing apples with oranges (Williams Declaration, paragraph 57).

Ex. 1004 (Reexamination history), 21–22. Following the interview, Applicant amended the then-rejected claims to recite the additional underlined terms in limitation 1[e]:

wherein the unique serial number space comprises the limited number of most significant bits uniquely corresponding to the limited number of most significant bits of the allocated block and of remaining bits of lesser significance that together comprise the one serial number instance.

Ex. 1004, 12. Afterwards, the Examiner issued a Notice of Allowability. *Id.* at 6. Explaining the reasons for allowance, the Examiner stated that the combined prior art of record “does not specifically disclose or fairly teach an RFID transponder” with the recited limitations including:

a unique serial number space encoded with one serial number instance from an allocated serial block of numbers, the allocated block being assigned a limited number of most significant bits, wherein the unique serial number space comprises the limited number of most significant bits uniquely corresponding to the limited number of the most significant bits of the allocated block.

Id.

The evidence of record shows that the Examiner fully considered the Applicant's arguments and agreed that the amendments overcame the rejection based on Traub's disclosures, which substantially recite the same portions of Traub relied upon by Petitioner, Traub 3:34–39, 4:5–12; Figures 4A, 4B. For the above reasons, Petitioner does not show sufficiently that the Examiner erred in a manner material to the patentability of the challenged claims. Pet. 69–70. In reaching that decision, we apply the principle that, “[i]f reasonable minds can disagree regarding the purported treatment of the art or arguments” by the examiner, then “it cannot be said that the Office erred in a manner material to patentability.” *Advanced Bionics*, Paper 6 at 9. This is a case where reasonable minds can differ, and the paucity of analysis provided by Petitioner in the Petition tips the scales in favor of a discretionary denial. *See* Pet. 69–70 (providing Petitioner's insufficient arguments pertaining to material examiner error).

III. CONCLUSION

Taking a holistic view of the totality of the information presented, we determine that the challenges set forth in the Petition are based on the same or substantially the same prior art or arguments previously presented to the Examiner. Moreover, Petitioner does not direct us to information sufficient

to establish a material Examiner error. Accordingly, we exercise our discretion under Section 325(d) and do not institute an *inter partes* review.

IV. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that Petitioner's request for an *inter partes* review, pursuant to 35 U.S.C. § 314(a), of claims 1–20 of the '967 patent is *denied*, and no trial is instituted.

IPR2024-01416
Patent 9,798,967 B2

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