UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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APPLE INC., TWITTER, INC., AND YELP INC.,
Petitioner,

v.

EVOLUTIONARY INTELLIGENCE, LLC,
Patent Owner.

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Case IPR2014-00086
Case IPR2014-00812
Patent 7,010,536 B1

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Before KALYAN K. DESHPANDE, BRIAN J. McNAMARA, and
GREGG I. ANDERSON, *Administrative Patent Judges.*

ANDERSON, *Administrative Patent Judge.*

FINAL WRITTEN DECISION
35 U.S.C. § 318(a) and 37 C.F.R. § 42.73

INTRODUCTION

On October 22, 2013, Apple, Inc. ("Petitioner")[1] filed a Petition requesting *inter partes* review of claims 2–14 and 16 of U.S. Patent No. 7,010,536 (Ex. 1001, "the '536 patent"). Paper 1 ("Pet."). On April 25, 2014, we granted the Petition and instituted trial for claims 2–12, 14, and 16 of the '536 patent on all of the grounds of unpatentability alleged in the Petition. Paper 8 ("Decision on Institution" or "Dec. Inst.").

After institution of *inter partes* review, Twitter, Inc. ("Twitter") and Yelp Inc. ("Yelp") filed a corrected Petition and Motion to Join the *inter partes* review. IPR2014-00812, Papers 4, 8. We granted the motion and joined Apple, Twitter, and Yelp (collectively, "Petitioner") in the *inter partes* review. Paper 16. Evolutionary Intelligence, LLC ("Patent Owner") filed a Patent Owner Response. Paper 20 ("PO Resp."). Petitioner filed a Reply. Paper 28 ("Pet. Reply"). Patent Owner filed a Motion to Exclude. Paper 34 ("PO Mot. Exclude")

An oral hearing was held on January 6, 2015. The transcript of the consolidated hearing has been entered into the record. Paper 41 ("Tr.").

We have jurisdiction under 35 U.S.C. § 6(c). This Final Written Decision is issued pursuant to 35 U.S.C. § 318(a). For the reasons discussed below, we determine that Petitioner has not shown by a preponderance of the evidence that claims 2–12, 14, and 16 of the '536 patent are unpatentable. Patent Owner's Motion to Exclude is denied.

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[1] Twitter, Inc. and Yelp Inc. filed a Petition in case IPR2014-00812 against the same patent, which case was joined with this case. Decision Granting Motion for Joinder (Paper 16). Twitter, Inc. and Yelp Inc. are also collectively referred to as "Petitioner" in this case.

A. Related Proceedings

Petitioner states that on October 23, 2012 it was served with a complaint alleging infringement of the '536 patent in Civil Action No. 6:12-cv-00783-LED in the District of Eastern District of Texas (Ex. 1007), which was transferred to the Northern District of California as Civil Action No. 3:13-cv-4201-WHA. The '536 patent is also the subject of several other lawsuits against third parties. Pet. 2.[2]

B. The '536 Patent

The '536 patent is directed to developing intelligence in a computer or digital network by creating and manipulating information containers with dynamic interactive registers in a computer network. Ex. 1001, 1:11–20; 3:1–5. The system includes an input device, an output device, a processor, a memory unit, a data storage device, and a means of communicating with other computers. *Id.* at 3:6–11. The memory unit includes an information container made interactive with, among other elements, dynamic registers, a search engine, gateways, a data collection and reporting means, an analysis engine, and an executing engine. *Id.* at 3:15–23.

The '536 patent describes a container as an interactive nestable logical domain, including dynamic interactive evolving registers, which maintain a unique network-wide lifelong identity. *Id.* at 3:29–35. A container, at

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[2] The Petition does not include page numbers. We have assigned page numbers beginning with page 1 at heading I.A. and concluding with page 31 at heading V. This convention corresponds to the assigned page numbers in the Table of Contents. As Patent Owner did in Patent Owner's Response (PO Resp. 1), all citations to the "Petition" are to the Petition filed by Apple in IPR 2014-00086. The Petition filed by Twitter and Yelp is a virtual copy. but the page numbers differ and we will not add those additional citations.

minimum, includes a logically encapsulated portion of cyberspace, a register, and a gateway. *Id.* at 9:2–4. Registers determine the interaction of that container with other containers, system components, system gateways, events, and processes on the computer network. *Id.* at 3:43–46. Container registers may be values alone or contain code to establish certain parameters in interaction with other containers or gateways. *Id.* at 9:19–22. Gateways are integrated structurally into each container or strategically placed at container transit points. *Id.* at 4:54–57. Gateways govern the interaction of containers encapsulated within their domain by reading and storing register information of containers entering and exiting that container. *Id.* at 4:58–66; 15:46–49.

The system for creating and manipulating information containers is set forth in Figure 2B as follows:
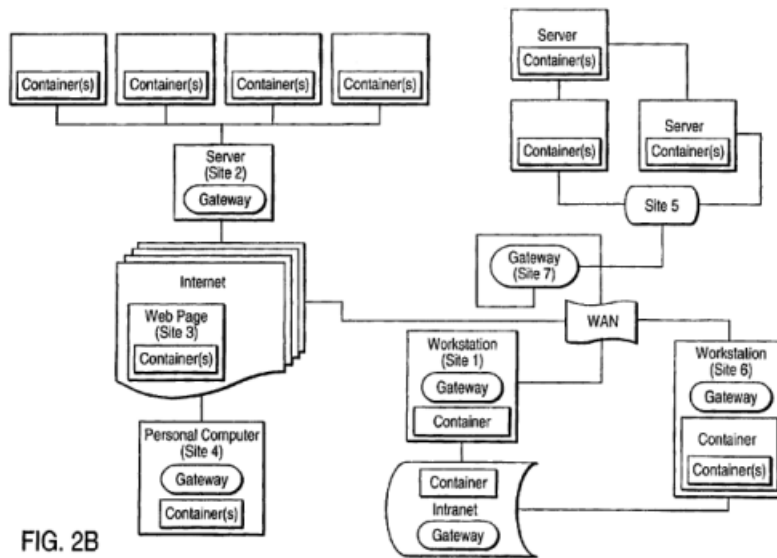

FIG. 2B

Figure 2B illustrates a computer network showing nested containers, computer servers, and gateways at Site 1 through Site 7. *Id.* at 10:59–62. Any of Sites 1 through 7 may interact dynamically within the system; for

example, Site 1 shows a single workstation with a container and gateway connected to an Intranet. *Id.* at 10:64–67. Site 2 shows a server with a gateway in relationship to various containers. *Id.* at 11:2–3. Site 3 shows an Internet web page with a container residing on it. *Id.* at 11:3–4. Site 4 shows a personal computer with containers and a gateway connected to the Internet. *Id.* at 11:4–6. Site 5 shows a configuration of multiple servers and containers on a Wide Area Network. *Id.* at 11:6–7. Site 6 shows a work station with a gateway and containers within a container connected to a Wide Area Network. *Id.* at 11:7–9. Site 7 shows an independent gateway, capable of acting as a data collection and data reporting site as it gathers data from the registers of transiting containers and as an agent of the execution engine as it alters the registers of transient containers. *Id.* at 11:8–13.

An example of the configuration the containers may have is provided in Figure 4 as follows:
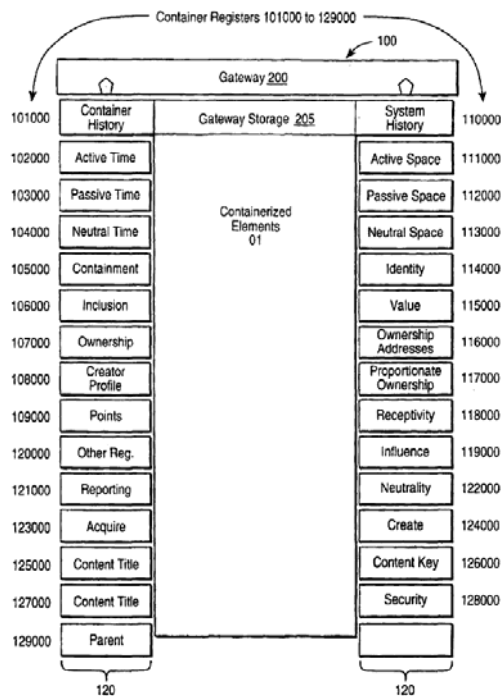

FIG. 4

Figure 4 shows an example of container 100 that includes containerized elements 01, registers 120, and gateway 200. *Id.* at 12:65–67. Registers 120 included in container 100 include, *inter alia*, active time register 102000, passive time register 103000, neutral time register 104000, active space register 111000, passive space register 112000, neutral space register 113000, and acquire register 123000. *Id.* at 14:31–39.

C. Illustrative Claim

Claims 2 and 16 are the two independent claims challenged. Claim 2 is reproduced below:

> 2. An apparatus for transmitting, receiving and manipulating information on a computer system, the apparatus including a plurality of containers, each container being a logically defined data enclosure and comprising:
>> an information element having information;
>> a plurality of registers, the plurality of registers forming part of the container and including
>>> a first register for storing a unique container identification value,
>>> a second register having a representation designating space and governing interactions of the container with other containers, systems or processes according to utility of information in the information element relative to an external-to-the-apparatus three-dimensional space,
>>> an active space register for identifying space in which the container will act upon other containers, processes, systems or gateways,
>>> a passive resister for identifying space in which the container can be acted upon by other containers, processes, systems or gateways,
>>> a neutral space register for identifying space in which the container may interact with other containers, processes, systems, or gateways; and

> a gateway attached to and forming part of the container,
> the gateway controlling the interaction of the container with
> other containers, systems or processes.

D. Ground Upon Which Trial Was Instituted

Trial was instituted on the ground that claims 2–12, 14, and 16 of the '536 patent were anticipated under 35 U.S.C. § 102(e)[3] by Gibbs.[4] Dec. Inst. 27. Patent Owner does not contend that Gibbs is not prior art.

ANALYSIS

A. Claim Construction

In an *inter partes* review, claim terms in an unexpired patent are interpreted according to their broadest reasonable construction in light of the specification of the patent in which they appear. 37 C.F.R. § 42.100(b); *In re Cuozzo Speed Techs., LLC*, 778 F.3d 1271, 1279–83 (Fed. Cir. 2015). . If an inventor acts as his or her own lexicographer, the definition must be set forth in the specification with reasonable clarity, deliberateness, and precision. *Renishaw PLC v. Marposs Societa' per Azioni*, 158 F.3d 1243, 1249 (Fed. Cir. 1998). The terms also are given their ordinary and customary meaning as would be understood by one of ordinary skill in the art in the context of the disclosure. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007).

Neither Petitioner nor Patent Owner disputes our constructions in the Decision on Institution. PO Resp. 15, n. 3. Our prior constructions, including the rationale for them, are repeated below.

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[3] The '536 patent was filed prior to the effective date of § 102, as amended by the America Invents Act ("AIA")—March 16, 2013— and is governed by the pre-AIA version of § 102(e). *See* AIA § 3(n)(1).
[4] U.S. Patent No. 5,836,529, filed Oct. 31, 1995 ("Gibbs," Ex. 1006).

1. "container"

Independent claims 2 and 16 recite the term "container," as do several of the dependent claims, e.g., claims 5 and 7. The Specification describes a "container" as "a logically defined data enclosure which encapsulates any element or digital segment (text, graphic, photograph, audio, video, or other), or set of digital segments, or referring now to FIG. 3C, any system component or process, or other containers or sets of containers." Ex. 1001, 8:64–9:2.

Thus, we construe "container" to mean "a logically defined data enclosure which encapsulates any element or digital segment (text, graphic, photograph, audio, video, or other), or set of digital elements."

2. "register"

Independent claims 2 and 16 recite "a plurality of registers, the plurality of registers forming part of the container." The Specification of the '536 patent broadly describes "container registers" as follows:

> Container registers 120 are interactive dynamic values
> appended to the logical enclosure of an information container
> 100, and serve to govern the interaction of that container 100
> with other containers 100, container gateways 200 and the
> system 10, and to record the historical interaction of that
> container 100 on the system 10. Container registers 120 may
> be values alone or contain code to establish certain parameters
> in interaction with other containers 100 or gateways 200.

Ex. 1001, 9:14–23.

Thus, we determine "register" means a "value or code associated with a container."

> 3. *"active space register"/"passive space register"/"neutral space register"*

The terms "active space register," "passive space register," and "neutral space register" appear in independent claim 2.

The Specification of the '536 patent states, at several locations, that registers are "dynamic" and "interactive." *See* Ex. 1001, 7:25–30. As discussed above, registers are user-created and attach to a unique container. *Id.* at 14:23–26. Registers may be of different types, including pre-defined registers. *Id.* at 14:1–3. Pre-defined registers are available immediately for selection by the user, within a given container. *Id.* at 14:3–6. Pre-defined registers may be active, passive, or interactive and may evolve with system use. *Id.* at 14:29–30. In the context of predefined registers, "active space," "passive space," and "neutral space" are part of the system history. *Id.* at 14:30–42, Fig. 4. The Specification does not describe further any of the terms.

The claim 2 elements, "active space register," "passive space register," and "neutral space register" each expressly defines the function of the element in claim 2.

The "active space register" is:

"for identifying space in which the container *will act upon* other containers, processes, systems or gateways . . ." (emphasis added).

The "passive space register" is:

"for identifying space in which the container *can be acted upon* by other containers, processes, systems or gateways . . ." (emphasis added).

The "neutral space register" is:

"for identifying space in which the container *may interact* with other containers, processes, systems, or gateways . . ." (emphasis added).

Patent Owner lists "neutral space register" as a term for further construction. PO Resp. 19–22. Patent Owner's argument is directed toward whether "neutral space register" is a limitation shown in Gibbs and will be addressed in our anticipation analysis section below.

As discussed above, we have construed the term "register" to mean "value or code associated with a container." The modifiers "active," "passive," and "neutral" serve to distinguish the claimed registers that are defined functionally in claim 2. No further construction is required.

4. "acquire register"

The term "acquire register" appears in claims 8, which depends from claim 2, and independent claim 16. The Specification describes the acquire register as "enabling the user to search and utilize other registers residing on the network." Ex. 1001, 15:27–29. This is consistent with the claim language itself. Dec. Inst. 13. No further construction is required.

5. "gateway"

Independent claims 2 and 16 recite "a gateway attached to and forming part of the container, the gateway controlling the interaction of the container with other containers, systems or processes."

The '536 patent describes that:

[g]ateways gather and store container register information according to system-defined, system-generated, or user determined rules as containers exit and enter one another, governing how containers system processes or system components interact within the domain of that container, or after exiting and entering that container, and governing how containers, system components and system processes

> interact with that unique gateway, including how data collection and reporting is managed at that gateway.

Ex. 1001, 4:58–66.

Neither party raises any issue with our preliminary construction (Dec. Inst. 13–14) and thus, based on the Specification, our final construction of "gateway" is "hardware or software that facilitates the transfer of information between containers, systems, and/or processes."

6. means elements

Claims 9–12 each contain means plus function elements. Petitioner contends that there is a lack of structure for certain means plus function elements. We do not reach this issue because, for reasons discussed below, Petitioner has not put forth a sufficient case of unpatentability as to the independent claim from which claims 9–12 depend.

7. "first register having a unique container identification value"

Unlike all the previous terms, "first register having a unique container identification value" was not construed in the Decision on Institution. Patent Owner contends the term requires construction in light of contentions made by Petitioner's expert, Dr. Henry Houh, in his deposition testimony. PO Resp. 16–19 (citing "Houh Deposition," Ex. 1008). The term appears in claims 2 and 16. Specifically, Patent Owner contends the Houh Deposition asserts that the term "unique container identification value" is for "any container." PO Resp. 16 (citing Ex. 1008, 106:21–109:8) (emphasis omitted). Patent Owner contends this testimony is contrary to the Declaration of Dr. Houh ("Houh Declaration," Ex. 1003, ¶¶ 110–111). *Id.*

Patent Owner cites the language of the claim itself to assert "first register having a unique container identification value" is directed to the container of which the term is an element and not "any" container." PO Resp. 16. Patent Owner argues use of the article "a" is dictated because it is the first reference to the term, which has no antecedent basis. *Id.*

Patent Owner cites to the Specification as describing "a register with a 'unique network-wide lifelong identity' for the given container." PO Resp. 16–17 (citing Ex. 1001 at 3:29–39) (emphasis omitted). Patent Owner argues the system-defined registers may include "an identity register maintaining a unique network wide identification and access location for a given container." *Id.* at 17 (citing Ex. 1001, 3:57–64) (emphasis omitted).

Patent Owner also references the prosecution of the '536 patent, in which claim 29 recites interacting between first and second information containers, and claim 30, which depends from claim 29, recites "wherein the steps of determining identification information are performed by reading respective identification registers of the first and second containers." *See id.* at 17 (citing Ex. 1002, 50–51). Patent Owner argues this claim language "make no sense if the 'unique identification value' is construed as identifying containers other than those interacting, because the entire point of the exchange was to compare unique identifiers to see if interaction between the two containers would be allowed." *Id.* Patent Owner thus proposes the term "*first register having a unique container identification value*" means "a first register having a value that uniquely identifies the given container." *Id.* at 19.

Petitioner argues that absent "reference to any particular container" the term applies to "any" container. Pet. Reply 9. In further support of its

position, Petitioner argues the use of the article "a," as opposed to "the," precludes the claim language from being limited to the "the container that includes the register." *Id.* Petitioner notes all the other registers recited reference "the" container, so "a" must mean any. *Id.* Petitioner contends the "identity register" disclosure is not dispositive and is just "one example" of the first register. *Id.* 9–10 (citing Deposition of Mathew Daniel Green, Ph.D. ("Green Deposition," Ex. 2009, 113:1–22, 107:2–110:22; *see id.* at 66:11–22). The Petitioner alleges the original claims from the prosecution are irrelevant. *Id.* at 10.

In construing claims we consider the broadest reasonable interpretation consistent with the Specification. *In re Cuozzo,* 778 F.3d at 1278–1282. We start with the claim language. Claim 2 recites "[a]n apparatus . . . including a plurality of containers, *each container* being a logically defined data enclosure and comprising." Ex. 1001, 30, 31–34 (emphasis added). The claim proceeds to recite "a first register for storing a unique container identification value." From this language, we conclude that the "first register" is a part of "each container." The "first register" claim limitation further includes "a unique container identification value." In the context of this claim, we are not persuaded by Petitioner's argument that the use of "a" before the disputed term broadens the disputed term to "any" container. Pet. Reply 9. .

The Specification describes a "container" in some detail, a description which we noted above in construing "container." *See* Ex. 1001, 3:29–35. The Specification describes "container" as follows:

> *A container is* an interactive nestable logical domain
> configurable as both subset and superset, including a minimum

>   set of attributes coded into dynamic interactive evolving
>   registers, containing any information component, digital code,
>   file, search string, set, database, network, event or process, and
>   *maintaining a unique network-wide lifelong identity.*

Id. (emphasis added). Among other things, the container "maintain[s] a

unique network-wide lifelong identity." *Id.* at 3:34–35. While "first

register" appears only in the Abstract and the claims, registers are described

and include "an identity register maintaining a unique network wide

identification and access location for a given container." PO Resp. 17

(citing Ex. 1001, 3:57–64) (emphasis omitted). The claims do not include an

"identity register," but do include the "first register," and the term under

consideration, "a unique container identification value." While Petitioner

correctly notes that the Green Deposition states the "identity register" is an

"example," Dr. Green goes on to testify "[h]owever, I think that from the

context of the specification, my interpretation is that those descriptions refer

to the first register for storing a unique container identification value." Ex.

2009, 113:11–15. Based on the Specification, we conclude the description

of "identity register" in the Specification describes the "unique container

identification value" of the "first register." There is no other reasonable

explanation associating the functionality of the "identity register" with the

claimed invention. Petitioner's argument that the "identity register" is an

"example" does not persuade us otherwise. Pet. Reply 9. An "example"

does not preclude the "first register" claimed from being described as the

"identity register," particularly given that "first register" is not otherwise

described in the Specification and "identity register" is not part of any claim.

We disagree with Petitioner's argument that claims asserted in the prosecution history are irrelevant to claim construction. Pet. Reply 10. We note that originally filed claim 30 recites, in pertinent part: "steps of determining identification information are performed by reading respective identification registers of the first and second containers." We read this language to support Patent Owner's contention that each container has an "identification register" to determine whether interaction between containers is allowed. Originally filed claim 30 recites in part "reading respective identification registers." Claim 30's language corresponds to the Specification's description of the "identity register" and the claimed "first register for storing a unique container identification value."

Neither party has specifically relied on any extrinsic evidence and our construction is based primarily on intrinsic evidence. To the extent the Houh and Green Depositions may be considered extrinsic evidence; we have considered the party's citations to them, noting them above.

Thus, we adopt Patent Owner's proposed construction and construe "first register having a unique container identification value" to mean "a first register having a value that uniquely identifies the given container."

B. *Anticipation of Claims 2–12, 14 and 16 by Gibbs*

Petitioner contends that claims 2–14 and 16 of the '536 patent are anticipated under 35 U.S.C. § 102(e) by Gibbs. Pet. 12–31. To support this position, Petitioner cites the testimony of Henry Houh. The only ground of unpatentability presented is anticipation.[5]

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[5] Patent Owner "reasserts" its objection to the Petition as improperly incorporating by reference the Houh Declaration. PO Resp. 22, n.5 (citing 37 C.F.R. § 42.6 (a)(3)).

"[U]nless a reference discloses within the four corners of the document not only all of the limitations claimed but also all of the limitations arranged or combined in the same way as recited in the claim, it cannot be said to prove prior invention of the thing claimed and, thus, cannot anticipate under 35 U.S.C. § 102." *Net MoneyIn, Inc. v. VeriSign, Inc.*, 545 F.3d 1359, 1371 (Fed. Cir. 2008). Notwithstanding the preceding, we must analyze prior art references as a skilled artisan would, but this is "not, however, a substitute for determination of patentability in terms of § 103." *Cont'l Can Co. USA v. Monsanto Co.*, 948 F.2d 1264, 1268–69 (Fed. Cir. 1991).

For reasons discussed below, Petitioner has not established by a preponderance of the evidence that claims 2–12, 14, and 16 are unpatentable as anticipated by Gibbs.

1. Gibbs Overview

Gibbs describes a system and process for monitoring and managing the operation of a railroad system. Ex. 1006, 3:65–4:10. The railroad management system operates on a computer system and its components are connected via a network. *Id*. at 5:12–14.
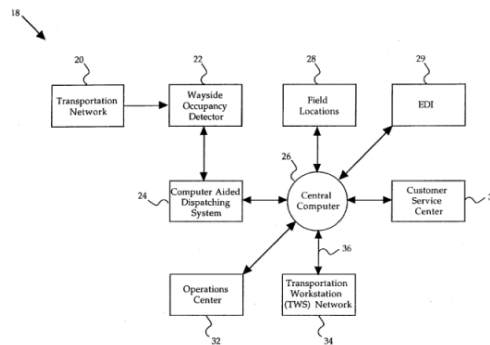
Figure 1 is reproduced below.

Fig. 1

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Figure 1 is an object based railroad transportation network management system. As shown in Figure 1, central computer 26 organizes and stores this railroad system information so that it can later retransmit the information in response to a request from any node 24, 28, 29, 30, 32, or 34. Ex. 1001, 5:28–31.

The system is object oriented and uses objects to represent important aspects of the railroad system such as train object 72, locomotive object 74, crew object 78, car object 80, end-of-train object 82, and computerized train control object 89. *Id*. at 7:5–8. A map object library contains map objects to generate a transportation network map object and to display and transmit information in response to a user request. *Id.* at 8:53–63. A control management object allows the user to activate any object within the map object library. *Id*. at 8:20–31.

Each object in the railroad management system has at least four distinct types of data: locational attributes, labeling attributes, consist attributes, and timing attributes. *Id.* at 9:28–10:4, Fig. 7. These attributes can include information such as a unique ID, the physical location of the object, and object specific data. *Id.* at 10:46–51. Each object contains references to its associated data structure, i.e., the four data types described above, and program instructions. *Id.* at 7:21–27.

2. Whether Gibbs discloses the claimed "container"[6]

In the Petition, Petitioner argued the objects used by Gibbs's railroad management system are examples of logically defined data enclosures. Pet. 13. The objects are, therefore, the "containers" specified in the preamble of

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[6] Both independent claims 2 and 16 include the limitation in question.

claim 2[7] of the '536 patent. *Id.* (citing Ex. 1003 ¶¶ 107–111). In its Reply, Petitioner contends Gibbs "shows the claimed 'container' via its description of a collection of transport, map, and report objects that are instantiated and used to display maps and reports to users." Pet. Reply 1, 3 (citing Pet. at 15, 18–19, 23; Ex. 1003 ¶¶ 89–90, 94, 96–97; "Houh Supplemental Declaration," Ex. 1009 ¶¶ 5–16). Dr. Houh uses the term "TMR subsystem," i.e., "transport object/map object/report object," as "shorthand for the architecture and objects" described in Gibbs's collection of objects. Pet. Reply 2. "TMR subsystem" is not a term used in Gibbs.

> *a. Denial of Petition based on change of theory*

Patent Owner argues that Petitioner changed its position from citing Gibbs's objects as meeting the container limitation to now contending the TMR subsystem is the "container." PO Resp. 24 (citing Ex. 1008, 102:19–104:13). Patent Owner characterizes the change as a switch from express anticipation to an inherency argument. *Id.* at 37. Patent Owner contends we should deny the Petitioner because of the change of position. *Id.* at 38.

The Petition asserted that the objects of Gibbs meet the container limitation. Pet. 13 (citing Ex. 1003 ¶¶ 107–111). In particular, on behalf of Petitioner, Dr. Houh asserted that "[T]he objects used by the Gibbs railroad management system are examples of logically defined data enclosures, and exemplify the 'containers' claimed in claim 2 of the '536 patent." Ex. 1003 ¶ 110. Patent Owner notes that Dr. Houh subsequently stated in his deposition that the TMR subsystem "must be" present in Gibbs. PO Resp. 3.

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[7] The preamble forms an antecedent basis for "containers" as used in the claims and will be given weight. *See, Eaton Corp. v. Rockwell Int'l Corp.*, 323 F.3d 1332, 1339 (Fed. Cir. 2003).

Patent Owner argues that this testimony represents an impermissible change in Petitioner's position from express anticipation to inherent anticipation. PO Resp. 3, 24, 37–38. Petitioner denies it is now proceeding on an inherency theory, arguing that Dr. Houh's use of the label "TMR subsystem" during his deposition is a shorthand for the architecture and objects in Gibbs that anticipate the claims, rather than new evidence. Pet. Reply 3. Dr. Houh contends that his position is not new. Ex. 1009 ¶38. Nevertheless, Petitioner argues that anticipation exists when a claimed limitation is implicit in the relevant reference. *Id.* at 5.

Anticipation by Gibbs remains the sole challenge asserted by Petitioner. Even if Petitioner has altered some of its positions concerning its challenge, in this case we do not find cause to dismiss the Petition on that basis. In view of Petitioner's argument that it has not changed its position, we proceed on the basis that Dr. Houh stands by his testimony that "[T]he objects used by the Gibbs railroad management system are examples of logically defined data enclosures, and exemplify the 'containers' claimed in claim 2 of the '536 patent." Ex. 1003 ¶ 110.

> *b. Whether the "collection of transport, map and report objects" of Gibbs discloses "a plurality of containers" comprising all the registers of the claims*

The objects of Gibbs fall within our construction of "container" as meaning "a logically defined data enclosure which encapsulates any element or digital segment (text, graphic, photograph, audio, video, or other), or set of digital elements." We, however, determine that Gibbs does not disclose a "container" *as claimed*. Claims 2 and 16 recite "each container being a logically defined data enclosure and comprising," among other things, the

specified registers. As discussed above, each of the active, passive, and neutral registers of claim 2 "identif[y] space" in which the claimed container "will act," "can be acted upon," and "may interact with other containers, processes, systems, or gateways." Claim 16 recites a second register that "govern[s] interactions of the container with other containers, systems or processes." [8] Claim 16 also recites an "acquire register" that controls "whether the container adds a register from other containers or adds a container from other containers when interacting with them."

In order to show that the various objects of Gibbs are the necessary registers of the claimed "container," Petitioner argues that the "discrete" entities of Gibbs are within an "object-oriented programming structure" as is conventionally known. Pet. Reply 4 (citing Ex. 1003 ¶¶ 78, 89; Ex. 1006, 7:24–27) (emphasis omitted). Thus, according to Petitioner, Gibbs's system combines the transport, map, and report objects so a user can access data about the train system. *Id.* at 4–5. Petitioner contends this "[c]ompound 'object' created by combining the transport, map, and report objects in varying manners to give users access to real-time data about the train system is plainly a 'container.'" *Id.* (citing Ex. 1009 ¶¶ 33–37, 42–48; *see* Ex. 1001, 3:28–34). Thus, Petitioner contends the "discrete" objects of Gibbs may be combined to disclose the registers of the claimed "container." *See* Pet. 13–18.

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[8] Furthermore, each claimed container of claims 2 and 16 has a gateway attached to it. (Ex. 1001, 30:55–57; 32:43–45). Similar to the registers, the gateway "control[s] the interaction of the container with other containers, systems or processes."

Patent Owner disputes Petitioner's contention that Gibbs shows a collection of objects that disclose the claimed "container." PO Resp. 25. Patent Owner argues Gibbs discloses "22 distinct objects" which are "treated by the processing unit 48 as discrete entities." *Id.* (citing Ex. 1006, 7:24–27; 8:20–23; 8:48–52; 9:27–31). In addition, Patent Owner argues that Gibbs differentiates between two "genuses of objects," i.e., transport objects and service objects, which do not overlap. *Id.* More specifically, the transport objects are detailed in a transport object library as shown in Figure 5 of Gibbs. *Id.* Details of service objects are shown in Figures 6a, 6b, and 6c. *Id.* at 26.

Because the objects are discrete, Patent Owner argues Gibbs's attributes and other data items belong with a specific object and not every object. PO Resp. 26. In support of its argument, Patent Owner points to the attributes of the transport object data structure, e.g., locational attributes, labelling attributes, consist attributes, and timing attributes, are retrieved to effect maps in the map object library. *Id.* (citing Ex. 1006, Fig. 7, 9:58–67). The attributes described in Gibbs's transport object are not, according to Patent Owner, attributes of any other object. *Id.*

Petitioner further argues what an anticipatory reference teaches must be viewed from the perspective of the person of ordinary skill and what is implicit in the reference. Pet. Reply 5. Thus, Petitioner relies on various disclosures from Gibbs to support its contention that the collection of objects having different functions and attributes, e.g., transport, map, and report objects, would be considered a container to a person of ordinary skill. *Id.* at 5–6.

As discussed above, the Houh Declaration submitted with the Petition contends that the objects of Gibbs "exemplify the 'containers' claimed in claim 2 of the '536 patent." Ex. 1003 ¶ 110. However, the Houh Deposition states that the container is "the thing that comprises the transport object library objects, the map object library objects, report object library objects that are instantiated and running in the system." Ex. 1008, 73:17–24. The Houh Supplemental Declaration alleges the deposition testimony is consistent with the Houh Declaration. Ex. 1009 ¶ 38. We have reviewed the paragraphs of the Houh Declaration submitted with the Petition (Ex. 1003 ¶¶ 90, 92, 94, 96–97, 104) cited in the Houh Supplemental Declaration at paragraph 38. Other than ¶ 110 of the Houh Declaration, the Houh Supplemental Declaration does not identify any specific object or collection of objects as constituting the "container."

Petitioner also argues that its position in the Petitioner Reply on what constitutes a "container" is supported by the original Houh Declaration. Pet. Reply 3 (citing Ex. 1003 ¶¶ 89–90, 94, 96–97). As discussed above, however, the original Houh Declaration described the various objects of Gibbs in some detail but, other than paragraph 110, did not specify what particular object or group of objects constitutes a "container."

Petitioner argues that what an anticipatory reference teaches must be analyzed from the perspective of one of ordinary skill and that is it proper to take into account not only specific teachings of the references, but also what inferences one of ordinary skill in the art reasonably would be expected to draw. Pet. Reply. 5 (citations omitted). In view of the apparently inconsistent testimony of Dr. Houh, we are not persuaded that the inferences a person of ordinary skill reasonably would be expected to draw from Gibbs

would anticipate the claimed "container." The Houh Declaration is not consistent in identifying where the "container" element is found in Gibbs. The Houh Declaration differs from the Houh Deposition and Houh Supplemental Declaration. We relied on the Houh Declaration in instituting *inter partes* review. Dec. Inst. 17–18. Petitioner now relies on the Houh Deposition testimony and Houh Supplemental Declaration. *See, e.g.*, Pet. Reply 3 (heading A.), 4. As such, Petitioner's evidence is inconsistent and does not specify where the container element is found in Gibbs.

Instead, we credit the testimony of Patent Owner's expert, Dr. Green, who testifies that the transport object library of Gibbs is distinct from the service object library. Ex. 2006 ¶¶ 86–94; *see* Ex. 1006, Fig. 4. Dr. Green concludes:

> Gibbs thus discloses the objects in Figure 4 as falling into two genuses: transport objects and service objects. Gibbs discloses each of these genuses as a library (i.e., "transport object library 64" and service object library 66") that consists of specific types of objects.

Ex. 2006 ¶ 88. This testimony distinguishes the claimed container from the two separate collections of objects, transport and service, in Gibbs. Neither are we persuaded by the extensive description in the Houh Declaration of the various objects of Gibbs. Pet. Reply 3 (citing Ex. 1003 ¶¶ 89–100, 108– 109). We agree with Patent Owner that "Gibbs does not disclose any single," logically defined container that "comprises the instantiation of the transport, map, and object libraries." PO Resp. 39.

Thus, while Gibbs may disclose some objects that function like the claimed registers, Gibbs does not disclose the claimed container. Rather, the "attributes or data items disclosed by Gibbs are each described as belonging

to particular objects, not as generically belonging to every object in Gibbs'[s] system." PO Resp. 26.

c. Nesting of containers-inherency

Petitioner states it is not proceeding on principles of inherency, arguing the disclosure is explicit. Pet. Reply 3. Patent Owner noted that, while it is "unclear," Dr. Houh apparently argued the disclosure of Gibbs inherently disclosed the claimed container. PO Resp. 38–40 (citing Ex. 1008, 76:23–78:10, 75:16–76:16).

The argument Patent Owner understood as one of inherency was based on the TMR subsystem "nesting," which also is described in the '536 patent. *Id.* at 39. Patent Owner contends nesting is present only when a container includes "the logical description of another container." *Id.* (citing Ex. 1001 at 9:4–9; 4:46–53). Patent Owner argues Gibbs does not disclose any nestable containers each including the logical description of another container. *Id.* Petitioner responds that nothing in the claim language limits encapsulation of other containers to those including a logical description of another container. Pet. Reply 6–7.

Patent Owner raises nesting only in the context of a perceived inherency argument by Petitioner. PO Resp. 39. Petitioner is not alleging inherency. Pet. Reply 3. Thus, inherency is not before us.

To the extent Petitioner perceives nesting as supporting its argument that Gibbs discloses the claimed container, it is not persuasive. Petitioner argues that Gibbs discloses a unique ID for the transport object within the boundaries of the map. *Id.* at 7. That one object of Gibbs has a unique ID allowing it to interact with another object is insufficient. The '536 discloses that every container includes a logical description of "all containers defined

and to be defined in cyberspace." Ex. 1001, 9:8–9. As discussed above, this feature is claimed, for example,[9] in the neutral register of claim 2 which recites that "each container" of the apparatus claimed has a neutral register that "may interact" with other containers. That one transport object of Gibbs has an ID that allows it to be available to one other object does not disclose what is claimed. *See* PO Resp. 28 (arguing transport objects have unique IDs but service objects do not).

d. Conclusion

For the reasons discussed above, we determine Petitioner has not shown by a preponderance of the evidence that Gibbs discloses the claimed container.

3. Whether Gibbs Discloses "first register having a unique container identification value"

Petitioner also contends the railroad management system of Gibbs also discloses the claimed "plurality of registers" because it includes a number of libraries. Pet. 18 (citing Ex. 1003 ¶¶ 77, 82–85, 87, 115–117). Petitioner argues the "first register" of claim 1 is disclosed in Gibbs because objects in the train management system of Gibbs have unique IDs which correspond to the object. *Id.* (citing Ex. 1003, ¶¶ 82, 118-119).

Specifically, Petitioner relies on the transport object, which is uniquely identified. Pet. Reply 10. Petitioner's position is based on its proposed construction of "a unique container identification value," that "any" one object or container with a unique ID meets the limitation. We construed the term above and found that the term relates to a value that "uniquely identifies the *given container.*" Thus, each container claimed

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[9] Claim 2 includes four other registers.

must include the first register having a unique identifier. Gibbs is presented by Petitioner as showing only the transport object, i.e., container, with a unique identifier.

For the reasons discussed above, we determine Petitioner has not shown by a preponderance of the evidence that Gibbs discloses "a first register having a unique container identification value."

4. *Whether Gibbs Discloses "a neutral space register"*

Claim 2 recites a "neutral space register for identifying space in which the container *may interact* with other containers, processes, systems, or gateways." (Emphasis added). Gibbs discloses a train consist report. Ex. 1006, 16:53–17:4. To generate a train consist report a particular train is selected. *Id.* A train report object retrieves data from the train object and car object of the selected train. *Id.* The train report object allows the user to see graphically the positioning of the cars in the selected train. *Id.* Petitioner alleges the train object and car object therefore intersect, i.e., interact, in the report object to meet the neutral register limitation. Pet. 18 (citing Ex. 1003 ¶ 98).[10]

Patent Owner argues the fact that the train consist report lists the train object and associated car objects does not show the required interaction with other objects, i.e., containers. PO Resp. 50–51. Patent Owner contends the

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[10] In its Response at page 20, Patent Owner objects to the Decision on Institution stating: "In addition, Petitioner cites the disclosures related to the active and passive space registers, as meeting the neutral space register limitation." Dec. Inst. 20 (citing Pet. 18 (citing Ex. 1003 ¶¶ 138–140)). The Decision on Institution found support for a "neutral space register" based on the map report object generated from the train and car objects. *Id.* The quote above was a restatement of Petitioner's argument, prefaced by "[i]n addition."

mere retrieval of data and reporting the data graphically is not the required interaction because each of the train and car objects separately returns the data. *Id.* at 51.

Patent Owner further argues Gibbs does not "identify space" where interaction may occur. PO Resp. 52. Instead, a user of the train management system of Gibbs selects a train. *Id.* Only after the train is selected is locational information in the form of latitude and longitude generated for the selected train. *Id.* Patent Owner contends that the train consist report described in Gibbs is based on train selection, "not the locations of the train and cars." *Id.* (citing Ex. 1006, 16:53–54 ("To generate a train consist report, the train report object 414 prompts the user to select a particular train.")). To the extent train location is identified by latitude and longitude, Patent Owner argues they are "mere data; they do not identify the space in which the 'interaction' may occur." *Id.* We find both of Patent Owner's substantive arguments relating to Gibbs's train report persuasive. First, the claim limitation requires "interaction" and the mere collection of separate data does not disclose any interaction. Second, merely because spatial information is generated after another event, i.e., selection of a train object is not "identifying space," it is, at best, identifying space based on another action. The claim language supports both of our conclusions.

Petitioner's Reply fails to address the arguments made by Patent Owner, restating what is shown in Gibbs, and concluding the train reports shows interaction. Pet. Reply 14–15. Similarly, Petitioner conclusorily argues "the location of the transport object" meets the "identifying space" limitation. *Id.* at 15. These arguments are not persuasive because they fail

to set forth a factual basis and persuasive rationale for reaching the conclusion.

Thus, we determine Petitioner has not shown by a preponderance of the evidence that Gibbs discloses "neutral space register" as claimed.

5. *Whether Gibbs discloses an "active space register," "passive space register," and "acquire register"*

Claim 16 is not unpatentable as anticipated by Gibbs because Gibbs does not disclose either the claimed container or the first register. Claim 2 is not anticipated for the additional reason that the neutral register is not disclosed by Gibbs. Given our conclusions above, we need not address Patent Owner's additional arguments regarding the other claimed registers of claims 2 and 16.

6. *Conclusion*

Petitioner has not shown by a preponderance of the evidence that independent claims 2 and 16 are anticipated under § 102(e) by Gibbs. Claims 3–12, and 14 are multiply dependent on claims 1 or 2. By reason of their dependency on claim 2, Petitioner has not shown by a preponderance of the evidence that claims 3–12, and 14 are anticipated under § 102(e) by Gibbs.

C. *Patent Owner's Motion to Exclude*

Patent Owner filed a Motion to Exclude ("Mot. Exclude," Paper 34) the Houh Supplemental Declaration. The Houh Supplemental Declaration was filed with Petitioner's Reply Brief. Mot. Exclude 2. Petitioner filed an Opposition to Patent Owner's Motion to Exclude. ("Opp. Mot. Exclude," Paper 36). Petitioner alleges principally that the Houh Supplemental

Declaration was not objected to prior to filing the Motion to Exclude. Opp. Mot. Exclude 1. Patent Owner did not file a Reply.

Patent Owner must object to the evidence it seeks to exclude. 37 C.F.R. § 42.64(a). Once an objection is filed, a motion to exclude "must be filed to preserve any objection." 37 C.F.R. § 42.64(c). The motion to exclude must identify the objection. *Id.*

There is no record that Patent Owner objected. The Motion to Exclude does not identify any objection, as is required. Accordingly, the Motion to Exclude is denied.

<div align="center">ORDER</div>

ORDERED,

For the reasons given, it is

ORDERED that claims 2–12, 14, and 16 of U.S. Patent No. 7,010,536 have not been shown by a preponderance of the evidence to be unpatentable;

FURTHER ORDERED that Patent Owner's Motion to Exclude is denied; and

FURTHER ORDERED that, because this is a Final Written Decision, parties to the proceeding seeking judicial review of the decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

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