

Demonstratives of Patent Owner Autonomous Devices, LLC

Case No: IPR2023-01169
USPTO Patent Trial and Appeal Board

Oral Hearing: October 2, 2024

'134: Disputed Issues

<i>Inter Partes Review Grounds</i>		
Ground 1	Anticipation of Claims 1-20 based on Thomas	Slides 3-34
Ground 2	Obviousness of Claims 3, 5, 12-14 based on Thomas in view of POSA	Slides 35-55
Ground 3	Anticipation of Claims 1, 3, 17 based on Buehler	Slides 56-84
<i>Motion to Amend</i>		
Issue 1	Definiteness of Substitute Claims (§ 112)	Slides 85-90
Issue 2	Obviousness of Substitute Claims based on Thomas	Slides 91-103

'134: Disputed Issues – Ground 1 Anticipation (Thomas)

- **Claims 1, 10, 19: Thomas Does Not Disclose the Claimed Matching**
 - Claim 4: Thomas Does Not Disclose the Claimed Connections
 - Claim 7: Thomas Does Not Disclose the Claimed Determination of Temporal Correspondence
 - Claim 16: Thomas Does Not Disclose the Claimed Deleting, Modifying, Manipulating, or Inserting into the Claimed First Correlation
 - Claim 17: Thomas Does Not Disclose the Claimed Modifying, Executing, and Performing

'134: Ground 1: Thomas Does Not Disclose All the Limitations of Claim 1

Claim 1

determining the first one or more instruction sets for operating the first avatar of the application based on at least partial match between the second one or more object representations and the first one or more object representations; and

Ex. 1001 ('134); Claim 1

- **Partial match using:**
 1. Object representations

'134: Ground 1: Thomas Does Not Disclose the Claimed Matching (Claim 1)

Response

Limitation Petitioner first points to Thomas's disclosure that "the stored data enables the analysis of a user's behavior, tendencies, and inclinations for a given event," and "the simulator 120 can invoke a corresponding reaction based on the stored data, thereby simulating the user" as disclosing the claimed matching, Petition, 15 (quoting Ex. 1005, 5:25-29). But *"analysis" is different than "matching," and "stored data," "user's behavior," "tendencies," "inclinations," and "event" are all different than "object representations,"* thus "the stored data enables the analysis of a user's behavior, tendencies, and inclinations for a given event" in Thomas is different than "matching of object representations" in claim 1. Ex. 2007, ¶¶69-70. In fact, this portion of Thomas never mentions anything about matching, much less matching of object representations as required by claim 1. *Id.*

PO Resp. [24] at 15

'134: Ground 1: Thomas Does Not Disclose the Claimed Matching (Claim 1)

Thomas

1005. The stored data enables the analysis of a user's behavior, tendencies, and inclinations for a given event. Thus, as will be described in more detail below, when the simulator **120** is in simulation mode, and a particular event and/or situation occurs, the simulator 120 can invoke a corresponding reaction based on the stored data, thereby simulating the user.

Ex. 1005 at 5:24-29

'134: Ground 1: Thomas Does Not Disclose the Claimed Matching (Claim 1)

Response

Petitioner's next statement that "during simulation mode the system compares the first object representations recorded during learning mode (e.g., the spatial position of defenders) to the second object representations generated and received during simulation mode (e.g., the spatial position of defenders), and determines instructions for operating the avatar of a simulated user in response to a match," is Petitioner's own words unsupported by Thomas's actual disclosure, and is conclusory. Petition, 15-16. Even in its own words, Petitioner is wrong since **Thomas** *never discloses comparing or matching the spatial positions of defenders and only provides that such positions are analyzed.* Ex. 1005, 8:8-15. "Analysis" in Thomas

PO Resp. [24] at 15

'134: Ground 1: Thomas Does Not Disclose the Claimed Matching (Claim 1)

Thomas

For a pump fake event, during the learning mode **550**, the simulator **120** records how often a user pump fakes. For current circumstances, the simulator **120** records how covered the user was and user's location. During playback mode **600**, the simulator **120** will monitor for a shoot event and analyze the location of the simulated user and the defensive coverage. If criteria is met, then simulator **120** will invoke a pump fake.

Ex. 1005 at 8:8-15

'134: Ground 1: Thomas Does Not Disclose the Claimed Matching (Claim 1)

Thomas

The simulator 120 will invoke a pass if the current circumstances meet the criteria, e.g., how much the passing and receiving avatars are covered.

For a catch and shoot event, during the learning mode 550, the simulator 120 records how often a user catches and shoots right after the catch and records, as a current circumstance, the location of the user's avatar that catches and shoots. During playback mode 600, the simulator 120 will monitor when the simulated user catches the ball and analyze the simulated user's location on the basketball court. If the simulated user is located in the typical spot for catch and shoot, then the simulator 120 will have the simulated user immediately shoot the ball after the catch.

For a pump fake event, during the learning mode 550, the simulator 120 records how often a user pump fakes. For current circumstances, the simulator 120 records how covered the user was and user's location. During playback mode 600, the simulator 120 will monitor for a shoot event and analyze the location of the simulated user and the defensive coverage. If criteria is met, then simulator 120 will invoke a pump fake.

'134: Ground 1: Thomas Does Not Disclose the Claimed Matching (Claim 1)

Sur-Reply

In sum, Thomas discusses “analysis” of “stored data,” “user’s behavior,” “tendencies,” “inclinations,” “event,” and “situation.” But nothing in Thomas discloses anything regarding the claimed matching of object representations: *(i) the claimed operation is different (“matching” vs. “analysis” as discussed above), and (ii) the claimed element operated on is different (“stored data,” “user’s behavior,” “tendencies,” “inclinations,” “event,” and “situation” vs. “object representations” as discussed above).*

PO Sur-Reply [32] at 5

'134: Disputed Issues – Ground 1 Anticipation (Thomas)

- Claims 1, 10, 19: Thomas Does Not Disclose the Claimed Matching
- **Claim 4: Thomas Does Not Disclose the Claimed Connections**
- Claim 7: Thomas Does Not Disclose the Claimed Determination of Temporal Correspondence
- Claim 16: Thomas Does Not Disclose the Claimed Deleting, Modifying, Manipulating, or Inserting into the Claimed First Correlation
- Claim 17: Thomas Does Not Disclose the Claimed Modifying, Executing, and Performing

'134: Ground 1: Thomas Does Not Disclose All the Limitations of Claim 4

Claim 4

- Claim 4 states that the first correlation is connected with the third correlation by a connection.

4. The system of claim 1, wherein the first correlation is included in a knowledgebase, and wherein the knowledgebase further includes a third correlation including a third one or more object representations correlated with a third one or more instruction sets for operating: the first avatar of the application, the second avatar of the application, a third avatar of the application, or an avatar of another application, and wherein the third one or more object representations represent one or more objects of: the application, or the another application, and wherein the first correlation is connected with the third correlation by a connection.

Ex. 1001 ('134); Claim 4

'134: Ground 1: Thomas Does Not Disclose the Claimed Connections (Claim 4)

**Patent Owner
proposes construing
connection.**

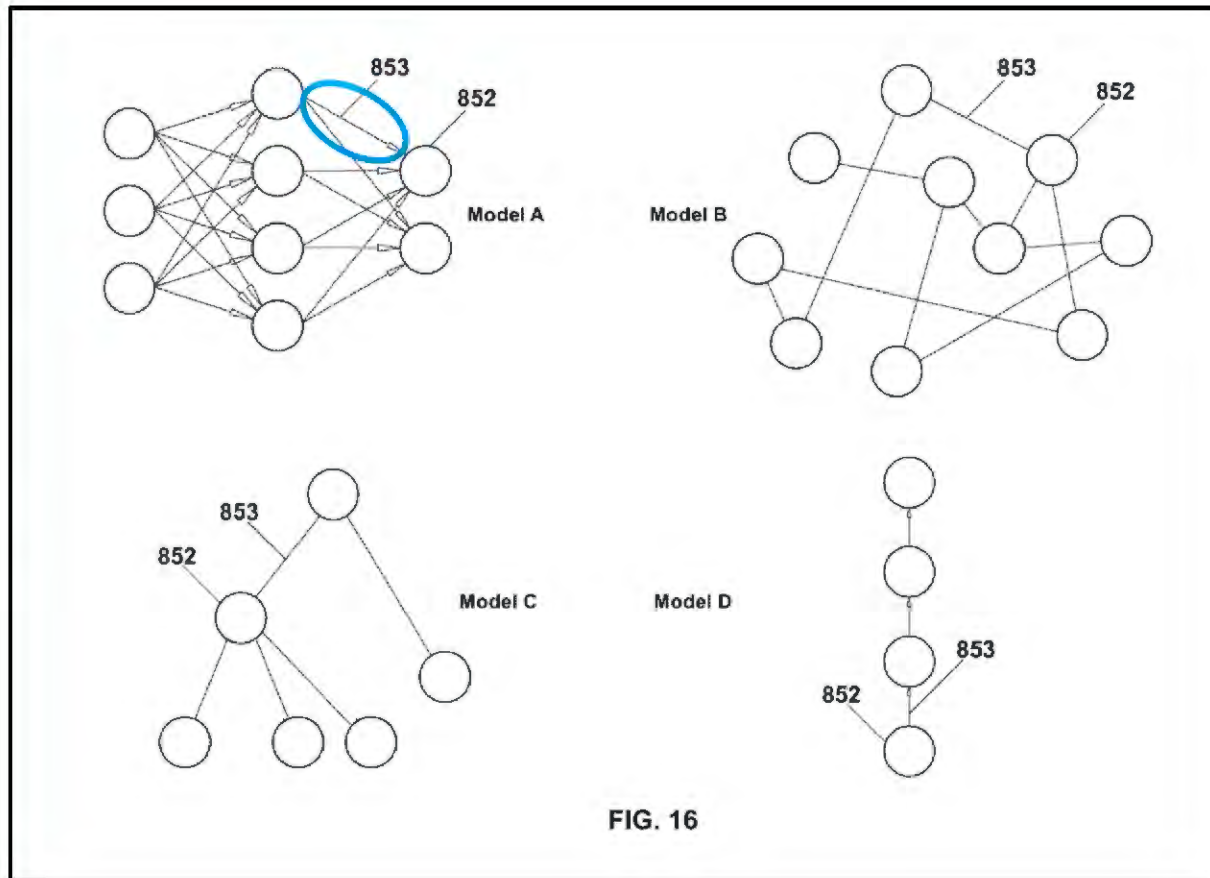
**“relationship that
includes a link”**

Response

In the context of claim 4 of the '134 patent, including in light of the claims, specification, and drawings, a “connection” should be construed as a “relationship that includes a link.” Ex. 2007, ¶¶54-60. *This construction is supported by the*

PO Resp. [24] at 9

'134: Ground 1: Thomas Does Not Disclose the Claimed Connections (Claim 4)

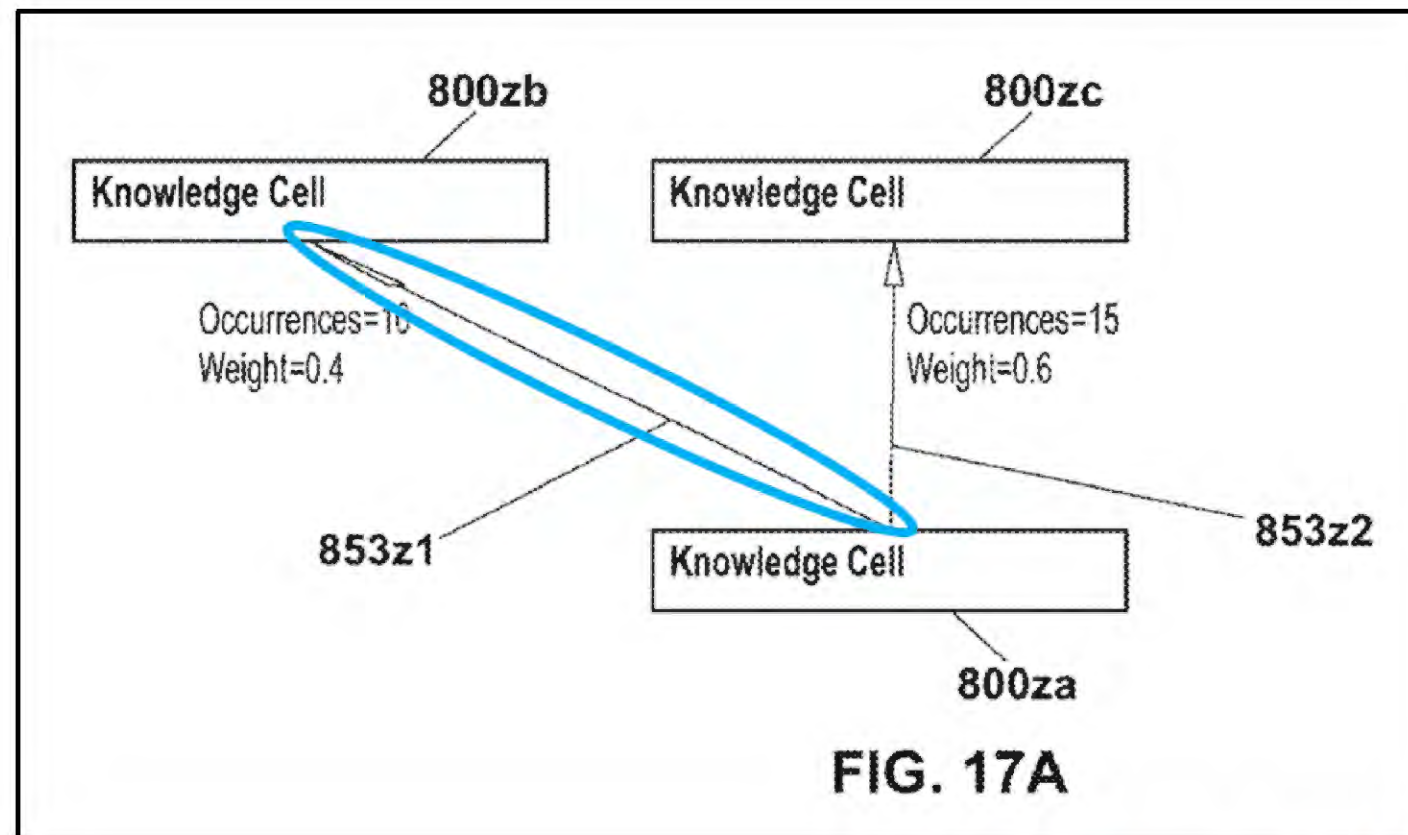


...ence functionalities may include a network of Nodes **852** (also referred to as neurons, etc.) and Connections **853** similar to that of a brain. Node **852** can store any data,

Ex. 1001 ('134) at FIG. 16; 105:21-24

'134: Ground 1: Thomas Does Not Disclose the Claimed Connections (Claim 4)

including objects with various properties. Knowledge cells may be interconnected, interrelated, or interlinked into knowledge structures using statistical, artificial intelligence, machine learning, and/or other models or techniques. Such



Ex. 1001 ('134) at 155:2-5; FIG. 17A

'134: Ground 1: Thomas Does Not Disclose the Claimed Connections (Claim 4)

Sur-Reply

CONSTITUTION Further, Petitioner's over-broad proposal for the alleged plain and ordinary meaning of "connection" as "an association or relationship," Reply, 10, contradicts the intrinsic record and *would effectively render the term meaningless since the connection in claim 4 is recited to narrow what is recited in independent claim 1.*

PO Sur-Reply [32] at 8

'134: Ground 1: Thomas Does Not Disclose the Claimed Connections (Claim 4)

Sur-Reply

Petitioner next incorrectly argues that Thomas discloses connections under the alleged plain and ordinary meaning of that term because “Thomas describes correlations each including a different instruction set for the same situation/event, where numerical weights are assigned to the correlations to indicate the frequency of occurrence of the action corresponding to each instruction set.” Reply, 11. Petitioner completely misses the point as *Petitioner’s statement does not mention connections at all*. Claim 4 recites “the first correlation is connected with the third correlation by a connection,” not “numerical weights are assigned to the correlations” in Petitioner’s citation of Thomas. Plus, numerical weights in Petitioner’s argument *are not applicable to a connection since they are not recited in claim 4*. Ex. 2007, ¶¶82-84.

PO Sur-Reply [32] at 10

'134: Ground 1: Thomas Does Not Disclose the Claimed Connections (Claim 4)

Sur-Reply

statement, A correlation is linked with another correlation in claim 4, not instruction set with an event/situation in Petitioner's statement. Additionally, the connections recited in claim 4 are not some ancillary occurrence weights, but are relationships that include specific links between correlations under the proper construction. These *connections link specific correlations to create multiple paths through the knowledgebase to enable multiple options in the decision making for autonomous operation*, Ex. 2007, ¶¶85-86, that Thomas does not even suggest, let alone disclose. Ex. 2007, ¶¶84-86.

PO Sur-Reply [32] at 11

'134: Disputed Issues – Ground 1 Anticipation (Thomas)

- Claims 1, 10, 19: Thomas Does Not Disclose the Claimed Matching
- Claim 4: Thomas Does Not Disclose the Claimed Connections
- **Claim 7: Thomas Does Not Disclose the Claimed Determination of Temporal Correspondence**
- Claim 16: Thomas Does Not Disclose the Claimed Deleting, Modifying, Manipulating, or Inserting into the Claimed First Correlation
- Claim 17: Thomas Does Not Disclose the Claimed Modifying, Executing, and Performing

Claim 7

7. The system of claim 1, wherein, to correlate the first one or more object representations with the first one or more instruction sets for operating the first avatar of the application, a determination is made that the first one or more instruction sets for operating the first avatar of the application temporally correspond to the first one or more object representations.

- Temporal Correspondence

Ex. 1001 ('134); Claim 7

'134: Ground 1: Thomas Does Not Disclose Claim 7

Response

or more object representations.” Ex. 2007, ¶¶87-90. Petitioner first argues that Thomas discloses temporal correspondence because “it describes that during learning mode the user inputs commands that the user-controlled avatar executes

(i.e., the first instruction set) at the same time that the first object representations are generated on the video interface screen, such as when a user initiates a command in response to certain defensive coverage of opposing players.” Petition, 29. But this reference to Thomas only describes associating the defensive coverage situation with whatever user’s commands happen to be executed at that time, and does not mention any determination of temporal correspondence between the user’s commands and the defensive coverage situation. Ex. 2007, ¶¶87-90. Thomas’s *correlating is not something that is performed in response to an extra processing step of determining a temporal correspondence of instruction sets and object representations* as required in claim 7.

'134: Ground 1: Thomas Does Not Disclose Claim 7

Thomas

For a pass out of shot event, the simulator **120**, during learn mode **550**, records a shot type, which avatar passed, and which avatar was passed to. For current circumstances, the simulator **120** records how open the receiving avatar was and how covered the passing avatar was. During playback **600**, for

For a pump fake event, during the learning mode **550**, the simulator **120** records how often a user pump fakes. For current circumstances, the simulator **120** records how covered the user was and user's location. During playback mode **600**, the simulator **120** will monitor for a shoot event and analyze the location of the simulated user and the defensive coverage. If criteria is met, then simulator **120** will invoke a pump fake.

Ex. 1005 at 7:55-59, 8:8-15

'134: Ground 1: Thomas Does Not Disclose Claim 7

Sur-Reply

Furthermore, Thomas does not disclose a determination of temporal correspondence of instruction sets and object representations because Thomas does not need such determination since Thomas simply associates situations and user commands at the same time when they happen to be received. Ex. 2007, ¶89. *Claim*

PO Resp. [24] at 27

'134: Disputed Issues – Ground 1 Anticipation (Thomas)

- Claims 1, 10, 19: Thomas Does Not Disclose the Claimed Matching
- Claim 4: Thomas Does Not Disclose the Claimed Connections
- Claim 7: Thomas Does Not Disclose the Claimed Determination of Temporal Correspondence
- **Claim 16: Thomas Does Not Disclose the Claimed Deleting, Modifying, Manipulating, or Inserting into the Claimed First Correlation**
- Claim 17: Thomas Does Not Disclose the Claimed Modifying, Executing, and Performing

'134: Ground 1: Thomas Does Not Disclose Claim 16

Claim 1 (from which Claim 16 depends)

1. A system comprising:
one or more processors; and
one or more non-transitory machine readable media storing machine readable code that, when executed by the one or more processors, causes the one or more processors to perform at least:
accessing a first correlation including a first one or more object representations correlated with a first one or more instruction sets for operating a first avatar of an application, wherein the first one or more object representations represent one or more objects of the application;

Ex. 1001 ('134); Claim 1

'134: Ground 1: Thomas Does Not Disclose Claim 16

Claim 16

16. The method system of claim 1, wherein:
an element of the first correlation is deleted after the first correlation is generated,
an element of the first correlation is modified after the first correlation is generated,
an element of the first correlation is manipulated after the first correlation is generated, or
an element is inserted into the first correlation after the first correlation is generated.

Ex. 1001 ('134); Claim 16

'134: Ground 1: Thomas Does Not Disclose Claim 16

Response

Petitioner claims that Thomas discloses that a value or numerical weight associated with user input is an element of a correlation and that this associated value or numerical weight is inserted into/modified/updated in the correlation. Petition, 48. But Petitioner has not explained how a value or numerical weight is an “element of the first correlation,” as required by claim 16. Claim 1, from which claim 16 depends, specifically provides that the first correlation only includes (A) a first one or more object representations correlated with (B) a first one or more instruction sets. Ex. 1001, Claim 1. Thus, *the only elements of the first correlation are the first instruction set and the first object representation*. Ex. 2007, ¶¶99-100. Therefore, association of a value or numerical weight with a user input in Thomas does not delete, modify, nor manipulate an element of the correlation *since it does not delete, modify, nor manipulate (A) the first one or more object representations nor (B) the first one or more instruction sets of the first correlation*. As a result, Thomas

'134: Disputed Issues – Ground 1 Anticipation (Thomas)

- Claims 1, 10, 19: Thomas Does Not Disclose the Claimed Matching
- Claim 4: Thomas Does Not Disclose the Claimed Connections
- Claim 7: Thomas Does Not Disclose the Claimed Determination of Temporal Correspondence
- Claim 16: Thomas Does Not Disclose the Claimed Deleting, Modifying, Manipulating, or Inserting into the Claimed First Correlation
- **Claim 17: Thomas Does Not Disclose the Claimed Modifying, Executing, and Performing**

'134: Ground 1: Thomas Does Not Disclose Claim 17

Claim 1 (from which Claim 17 depends)

1. A system comprising:
one or more processors; and
one or more non-transitory machine readable media storing machine readable code that, when executed by the one or more processors, causes the one or more processors to perform at least:
accessing a first correlation including a first one or more object representations correlated with a first one or more instruction sets for operating a first avatar of an application, wherein the first one or more object representations represent one or more objects of the application;

Ex. 1001 ('134); Claim 1

'134: Ground 1: Thomas Does Not Disclose Claim 17

Claim 17

17. The system of claim 1, wherein the machine readable code, when executed by the one or more processors, causes the one or more processors to further perform at least:

modifying: the first one or more instruction sets for operating the first avatar of the application, or a copy of the first one or more instruction sets for operating the first avatar of the application, and wherein the executing the first one or more instruction sets for operating the first avatar of the application includes executing: the modified the first one or more instruction sets for operating the first avatar of the application, or the modified the copy of the first one or more instruction sets for operating the first avatar of the application, and

wherein the performing, by the first avatar of the application or by the second avatar of the application, the one or more operations defined by the first one or more instruction sets for operating the first avatar of the application includes performing, by the first avatar of the application or by the second avatar of the application, one or more operations defined by: the modified the first one or more instruction sets for operating the first avatar of the application, or the modified the copy of the first one or more instruction sets for operating the first avatar of the application.

'134: Ground 1: Thomas Does Not Disclose Claim 17

Response

Thomas first fails to disclose “modifying: the first one or more instruction sets for operating the first avatar of the application.” Ex. 2007, ¶¶101-104. Petitioner points to Thomas’s disclosure that “[w]hen recording data for a kick profile 420, the simulator 120 may check to see if the user’s power has exceeded the minimum or maximum, increment the kick count, and add the power to the total power accumulated.” Petition, 49-50 (quoting Ex. 1005, 12:47-51). First, the *modifying recited in claim 17 is of instruction sets that are already correlated with object representations (i.e. after they are learned or stored* as recited in claim 1 that claim 17 ultimately depends on), *not “when recording data” (i.e. during learning)* as recited in Petitioner’s quote of Thomas. Ex. 2007, ¶¶102-104. Thus, Petitioner’s

PO Resp. [24] at 36

'134: Ground 1: Thomas Does Not Disclose Claim 17

Thomas

off, punts, and kicks field goals. When recording data for a kick profile 420, the simulator 120 may check to see if the user's power has exceeded the minimum or maximum, increment the kick count, and add the power to the total power accumulated. When the simulator 120 is in simulation mode,

Ex. 1005 at 12:47-51

'134: Ground 1: Thomas Does Not Disclose Claim 17

Response

Thomas first fails to disclose “modifying: the first one or more instruction sets for operating the first avatar of the application.” Ex. 2007, ¶¶101-104. Petitioner points to Thomas’s disclosure that “[w]hen recording data for a kick profile 420, the simulator 120 may check to see if the user’s power has exceeded the minimum or maximum, increment the kick count, and add the power to the total power accumulated.” Petition, 49-50 (quoting Ex. 1005, 12:47-51). First, the *modifying*

recited in claim 17 is of instruction sets that are already correlated with object representations (i.e. after they are learned or stored as recited in claim 1 that claim 17 ultimately depends on), not “when recording data” (i.e. during learning) as recited in Petitioner’s quote of Thomas. Ex. 2007, ¶¶102-104. Thus, Petitioner’s

PO Resp. [24] at 36

'134: Ground 1: Thomas Does Not Disclose Claim 17

Sur-Reply

Petitioner has failed to respond to Patent Owner's arguments that Thomas fails to disclose "executing: the modified the first one or more instruction sets," and "performing, by the first avatar of the application or by the second avatar of the application, one or more operations defined by: the modified the first one or more instruction sets." Response, 36-38. As discussed in Patent Owner's Response, Thomas does not disclose that any actual instruction set, command, user input, operation, or anything related to an instruction set recited in claim 17 is modified, executed, or performed. *Id.*

PO Sur-Reply [32] at 18

'134: Disputed Issues – Ground 2 Obviousness (Thomas-POSA)

- **Claim 3: Thomas Does Not Disclose or Suggest the Claimed Matching**
 - Claim 12: Thomas Does Not Disclose or Suggest the Claimed Single Knowledgebase
 - Claim 14: Thomas Does Not Disclose or Suggest the Claimed Knowledgebase and Different Applications

'134: Ground 2: Thomas Does Not Disclose All the Limitations of Claim 3

Claim 3

- Claim 3 requires determining a number or percentage of partially matching **portions**.
- Claim 3 requires determining that a **number** or **percentage** of **partially matching portions** of the first and third circumstance representations exceeds a:
 1. **threshold** number or
 2. **threshold** percentage

3. The system of claim 1, wherein the determining the first one or more instruction sets for operating the first avatar of the application based on the at least partial match between the second one or more object representations and the first one or more object representations includes:
determining that a number of at least partially matching portions of the second one or more object representations and portions of the first one or more object representations exceeds a threshold number, or
determining that a percentage of at least partially matching portions of the second one or more object representations and portions of the first one or more object representations exceeds a threshold percentage.

Ex. 1001 ('134); Claim 3

'134: Ground 2: Thomas Does Not Disclose the Claimed Matching (Claim 3)

Response

representations exceeds a threshold percentage.” Ex. 2007, ¶¶ 77-80. Petitioner first argues that:

Thomas describes comparing the first and second object representations, and executing an instruction set when the object representations of the defensive players observed in simulation mode at least partially match those recording during learning mode.

Petition, 20. This is Petitioner’s own words not supported in Thomas, and is conclusory. Thomas *does not disclose any matching* as discussed above in claim 1, *and Thomas does not mention any threshold at all*, much less determining that a

PO Resp. [24] at 20

'134: Ground 2: Thomas Does Not Disclose the Claimed Matching (Claim 3)

Response

Thomas does not mention any threshold in its disclosure. In fact, the word *“threshold” cannot be found in Thomas at all, let alone “number threshold” or “percentage threshold,” let alone that any matching is based on these thresholds.*

PO Resp. [24] at 21

'134: Ground 2: Thomas Does Not Disclose the Claimed Matching (Claim 3)

Sur-Reply

Petitioner's argument that the claimed determining can be performed without counting is wrong. Reply, 6. Petitioner states that "while a number of items (e.g., a number of partially matching portions) can be determined by simply counting the items, it can also be determined in other ways, such as by calculation (e.g., by adding together the number of items in multiple subsets of known (or estimated) quantity or by computing the value of an equation indicative of the number of items) or by estimation, among others." Reply, 6. Petitioner admits that counting is used in its own examples. Adding together a number of items in multiple subsets *still requires counting the items in each subset*. And computing an equation indicative of the number of items *still requires determining the number of items by counting*.

PO Sur-Reply [32] at 6

'134: Ground 2: Thomas Does Not Disclose the Claimed Matching (Claim 3)

Sur-Reply

Petitioner next refers to the pass example in Thomas and claims that a POSA “would have understood that ‘how much’ an avatar is covered refers to how many opposing-team players are within the vicinity of that avatar.” Reply, 6. *But Thomas never discloses nor even hints that how much an avatar is covered involves the number of players nor anything for that matter* (Thomas simply does not say anything about it).

Finally, Petitioner’s attempt to manufacture the use of a threshold in Thomas’s disclosure of criteria being met and a pump fake example also fails. Reply, 6-7. Thomas merely discloses that a pass is executed “if the current circumstances meet the criteria, e.g., how much the passing and receiving avatars are covered,” Ex-1005, 7:62-64, and “if criteria is met,” a pump fake is invoked. *Id.*, 8:-15. *But Thomas never uses the word threshold or explains how any threshold, much less numeric or percentage threshold for portions of object representations as in claim 3 is used,* and Petitioner’s attempt to manufacture the use of a threshold out of Thomas’s disclosure of coverage meeting criteria fails.

'134: Disputed Issues – Ground 2 Obviousness (Thomas-POSA)

- Claim 3: Thomas Does Not Disclose or Suggest the Claimed Matching
- **Claim 12: Thomas Does Not Disclose or Suggest the Claimed Single Knowledgebase**
- Claim 14: Thomas Does Not Disclose or Suggest the Claimed Knowledgebase and Different Applications

'134: Ground 2: Thomas Does Not Disclose or Suggest Claim 12

Claim 12

- “knowledgebase”
 1. “third correlation”
 2. “another user”
 3. “another learning process”

12. The system of claim 1, wherein the first correlation is included in a knowledgebase, and wherein the knowledgebase further includes a third correlation including a third one or more object representations correlated with a third one or more instruction sets for operating the first avatar of the application, and wherein the third one or more object representations represent one or more objects of the application, and wherein at least a portion of the first correlation is learned in a learning process that includes operating the first avatar of the application at least partially by a user, and wherein at least a portion of the third correlation is learned in another learning process that includes operating the first avatar of the application at least partially by another user, and wherein the user is: a human user, or a non-human user, and wherein the another user is: a human user, or a non-human user.

'134: Ground 2: Thomas Does Not Disclose or Suggest Claim 12

Petition

Ex. 1005, 19:57-62; Ex. 1003, ¶ 296. A POSITA would have understood, and it would have been obvious, that when a second user plays with the same team and avatars as a first user (e.g., different users playing with the Los Angeles Lakers), the object representations and instruction sets (i.e., including first, second, and third object representations correlated with first, second, and third instruction sets) for operating the same player on the same team (i.e., the first avatar) would be learned in another learning process that includes operating the first avatar of the application at least partially by another user. Ex. 1003, ¶ 297.

Pet. [1] at 41

'134: Ground 2: Thomas Does Not Disclose or Suggest Claim 12

Thomas

the interactive computer program 110. In the case where the simulator 120 and database 130 resides on a server 710, any participating user can upload its own user profile for access by any other participating user, and further any participating users can download or access any user profile available in the database 130.

Ex. 1005 at 19:57-62

'134: Ground 2: Thomas Does Not Disclose or Suggest Claim 12

Response

least partially by another user.” Ex. 2007, ¶¶91-94. Petitioner first points to the disclosure in Thomas that, “any participating user can upload its own user profile for access by any other participating user, and further any participating users can download or access any user profile available in the database 130.” Petition, 41 (quoting Ex. 1005, 19:57-62). But claim 12 does not recite *downloading or uploading user profiles or anything* like that, and instead requires *learning at least a portion of the third correlation in another learning process involving operation of the first avatar by another user*. Ex. 2007, ¶92. Users’ ability to upload and download user profiles in Thomas is a different concept than learning at least a portion of the third correlation in another learning process involving operation of the first avatar by another user, which Thomas fails to disclose. *Id.*

PO Resp. [24] at 29

'134: Ground 2: Thomas Does Not Disclose or Suggest Claim 12

Response

¶¶92-93 Thomas only discloses *one user operating an avatar during a learning process and simulating that one user in the simulation mode* (see Ex. 1005, Abstract). *Id.* Given Thomas's focus on simulating a particular single user, Thomas's system does not store mixed knowledge of different users in a single user profile (unlike the single knowledgebase including mixed knowledge of different users recited in claim 12) since that mixed multi-user knowledge would not simulate the particular single user to accomplish Thomas's stated purpose. Ex. 2007, ¶93. ~~This is~~

PO Resp. [24] at 30

'134: Ground 2: Thomas Does Not Disclose or Suggest Claim 12

Sur-Reply

Petitioner's claim that "[a] POSITA thus would have understood Thomas's disclosure of another user accessing a first user's profile to encompass that other user accessing the first profile in learning mode, and thus that other user operating the first user's avatar in learning mode," Reply, 13, fails to explain why a POSA would understand that Thomas discloses a single knowledgebase that includes mixed knowledge of a first correlation learned in one learning process with one user and a third correlation learned in another learning process with another user. Ex. 2007, ¶¶92-93. Thomas only discloses one user operating an avatar during a learning process and simulating that one user in the simulation mode (see Ex. 1005, Abstract). *Id.* Thomas's system does not store mixed knowledge of different users in a single user profile. Claim 12 requires learning at least portions of multiple correlations in different learning processes involving different users into a single mixed knowledgebase that Thomas mentions nothing about. Ex. 2007, ¶¶93-94.

'134: Ground 2: Thomas Does Not Disclose or Suggest Claim 12

Sur-Reply

Petitioner's final argument regarding this claim that the claimed "another user" should be given "no patentable weight," Reply, 14, is also wrong and is a new argument Petitioner did not present in the Petition and thus Petitioner is not permitted to present it here. *See Allsteel Inc. v. Dirt Environmental Solutions LTD.*, IPR2015-01691, *2 (PTAB April 22, 2019). Also, the "another user" claim limitation is a specifically recited and critical part of the claimed invention and should be given full patentable weight, as having different users operate an avatar in different learning processes to learn mixed knowledge into a single knowledgebase is technically complex and innovative. Ex. 2007, ¶115. As a result, Petitioner's argument fails.

PO Sur-Reply [32] at 14

'134: Ground 2: Thomas Does Not Disclose or Suggest Claim 12

Claim 12

• ~~“knowledgebase”~~

1. ~~“third correlation”~~

2. ~~“another user”~~

3. ~~“another learning process”~~

12. The system of claim 1, wherein the first correlation is included in a knowledgebase, and wherein the knowledgebase further includes a third correlation including a third one or more object representations correlated with a third one or more instruction sets for operating the first avatar of the application, and wherein the third one or more object representations represent one or more objects of the application, and wherein at least a portion of the first correlation is learned in a learning process that includes operating the first avatar of the application at least partially by a user, and wherein at least a portion of the third correlation is learned in another learning process that includes operating the first avatar of the application at least partially by another user, and wherein the user is: a human user, or a non-human user, and wherein the another user is: a human user, or a non-human user.

'134: Disputed Issues – Ground 2 Obviousness (Thomas-POSA)

- Claim 3: Thomas Does Not Disclose or Suggest the Claimed Matching
- Claim 12: Thomas Does Not Disclose or Suggest the Claimed Single Knowledgebase
- **Claim 14: Thomas Does Not Disclose or Suggest the Claimed Knowledgebase and Different Applications**

'134: Ground 2: Thomas Does Not Disclose or Suggest Claim 14

Claim 1 (from which Claim 14 depends)

1. A system comprising:
one or more processors; and
one or more non-transitory machine readable media storing machine readable code that, when executed by the one or more processors, causes the one or more processors to perform at least:
accessing a first correlation including a first one or more object representations correlated with a first one or more instruction sets for operating a first avatar of an application, wherein the first one or more object representations represent one or more objects of the application;

Ex. 1001 ('134); Claim 1

'134: Ground 2: Thomas Does Not Disclose or Suggest Claim 14

Claim 14

- “knowledgebase”
 1. “third correlation”
 2. “another application”

14. The system of claim 1, wherein the first correlation is included in a knowledgebase, and wherein the knowledgebase further includes a third correlation including a third one or more object representations correlated with a third one or more instruction sets for operating an avatar of another application, and wherein the third one or more object representations represent one or more objects of the another application.

Ex. 1001 ('134); Claim 14

'134: Ground 2: Thomas Does Not Disclose or Suggest Claim 14

Petition

Thomas also describes that users are able to play computer programs/games on multiple different “client console(s)” including “workstation 750” and “video game console 760, such as an Xbox or Playstation.” Ex. 1005, 19:35-43; Ex. 1003.

Pet. [1] at 45

'134: Ground 2: Thomas Does Not Disclose or Suggest Claim 14

Thomas

Turning to FIG. 10, the computer program 110, simulator 120, and database 130, as shown in FIG. 1, can reside on a single client console, such as the workstation 750 or a video game console 760, such as an Xbox or Playstation. Alternatively, or in addition, the computer program 110, the simulator 120, and database 130 can reside on a server 710 accessible by one or more client consoles 750/740 via a network, local area or wide area, such as the Internet 770. *In yet another*

Ex. 1005 at 19:35-43

'134: Ground 2: Thomas Does Not Disclose or Suggest Claim 14

Response

...on multiple user's game consoles." Petition: 45-46. But Petitioner's contention *only describes profiles learned in instances of one application (i.e. basketball video game) used in instances of the same application (i.e. the same basketball video game) on different game consoles, not instructions sets and object representations (i.e. first correlation) learned involving one application (i.e. Fortnite, etc.) and instructions sets and object representations learned (i.e. third correlation) involving a different application (i.e. Apex Legends, etc.)* as required by claim 14. Ex. 2007: 8996-97. Instructions and data for one application are

PO Resp. [24] at 32

'134: Disputed Issues – Ground 3 Anticipation (Buehler)

- **Claim 1: Buehler Does Not Disclose the Claimed Object of the Application and the Claimed Matching**
 - Claim 3: Buehler Does Not Disclose the Claimed Matching
 - Claim 17: Buehler Does Not Disclose the Claimed Matching, Executing, and Performing

'134: Ground 3: Buehler Does Not Disclose All the Limitations of Claim 1

Claim 1

- “objects of the application”
- Partial match using:
 1. Object representations

accessing a first correlation including a first one or more object representations correlated with a first one or more instruction sets for operating a first avatar of an application, wherein the first one or more object representations represent one or more objects of the application;

generating or receiving a second one or more object representations, wherein the second one or more object representations represent one or more objects of the application;

determining the first one or more instruction sets for operating the first avatar of the application based on at least partial match between the second one or more object representations and the first one or more object representations; and

Ex. 1001 ('134); Claim 1

'134: Ground 3: Buehler Does Not Disclose Objects of the Application (Claim 1)

Response

¶¶ 122-124. While Petitioner asserts that Buehler's virtual gripper overlaid as an augmented reality feature maps to the "avatar of the application" recited in claim 1, *see* Ex. 1006, 21:46-54, the object disclosed by Buehler that is operated on by Buehler's virtual gripper is a *physical object* and not an *object of the application* represented by an object representation, as required by claim 1. An object representation in claim 1 represents "an object of an application," not a physical object. A physical object is not an object of the application and thus Buehler fails to

PO Resp. [24] at 51

'134: Ground 3: Buehler Does Not Disclose Objects of the Application (Claim 1)

Buehler

Following the user's approval of the selected visual model, the robot may overlay virtual grippers on the image (or video stream) of the object to indicate where the grasp point would be, given the current arm location and orientation (step 606). Thus, without the need to actually lower the gripper and bring it in contact with the object (which could be a cumbersome and, in some instance, even dangerous procedure), the robot can give the user a sense of the likelihood of a successful pick-up. If the virtual gripper is

Via intuitive interactions with a user, robots may be trained to perform tasks such as visually detecting and identifying physical objects and/or manipulating objects. In some embodiments, training is facilitated by the robot's simulation of task-execution using augmented-reality techniques.

Ex. 1006 at 21:46-54, Abstract

'134: Ground 3: Buehler Does Not Disclose Objects of the Application (Claim 1)

Reply

Buehler's robot training system implements an "augmented reality" application that encompasses "real-world data (or the real world itself) augmented with computer-generated data." TESLA-1006, 2:4-5; *see* Petition, 56-57; TESLA-1022, ¶48. That is, both real-world objects (*e.g.*, the physical objects operated on by Buehler's virtual grippers) and computer-generated data (*e.g.*, Buehler's virtual grippers) constitute aspects of Buehler's augmented reality application. TESLA-1022, ¶48. *Indeed, Buehler is explicit that real-world objects are part of its*

Pet. Reply [29] at 18

'134: Ground 3: Buehler Does Not Disclose Objects of the Application (Claim 1)

Sur-Reply

world of the application and the physical world. In augmented reality, computer generated data is overlaid on the real world, but physical objects (i.e. concrete/metal/wood-made objects) are still in the real world. In fact, very simple logic dictates that *objects of an application and physical objects are mutually exclusive since objects (e.g., virtual objects) of an application (e.g., virtual world) exist only in the application and physical objects (e.g., concrete/metal/wood-made objects) exist in the physical world and cannot exist in any application.*

PO Sur-Reply [32] at 19

'134: Ground 3: Buehler Does Not Disclose Objects of the Application (Claim 1)

'134 Patent

or more processor circuits. In further embodiments, the application includes a computer game, a virtual world, a 3D graphics application, a 2D graphics application, a web browser, a media application, a word processing application, a spreadsheet application, a database application, a forms-based application, an operating system, a device control application, a system control application, or a computer application. In further embodiments, at least one of: the

Ex. 1001 ('134) at 2:12-19

'134: Ground 3: Buehler Does Not Disclose Objects of the Application (Claim 1)

Sur-Reply

Buehler involves augmented reality in its presentation of the virtual gripper and says nothing about whether the physical object that the virtual gripper is simulated to operate on can ever be an object of the application.

PO Sur-Reply [32] at 20

Buehler

Visually displaying the task in an augmented-reality display means that the robot overlays computer-generated graphics (in the broadest sense, i.e., including pictorial elements, text, etc.) onto the real-world, or a representation (such as a camera image) thereof.

the trainer, e.g., using augmented-reality techniques. As used herein, “augmented reality” refers to real-world data (or the real world itself) augmented with computer-generated data.

which may be a wall, an object surface, etc. Further, visual augmented reality need not necessarily use camera images. Instead, the robot may place optical signals into the real world itself. For example, to communicate its object selection to the user, the robot may simply shine a laser pointer at the object.

Ex. 1006 at 3:59-63, 2:3-5, 12:60-65

'134: Ground 3: Buehler Does Not Disclose Objects of the Application (Claim 1)

Dr. Saber's Testimony

16 Q. And an augmented reality application
17 involves some computer-generated aspects, and
18 some real-world aspects, is that agreeable?

19 A. Generally speaking, yes. It's
20 overlaying of computer generated objects upon
21 the real environment.

Ex. 1023 at 106:16-21

'134: Ground 3: Buehler Does Not Disclose All the Limitations of Claim 1

Claim 1

- “objects of the application”
- Partial match using:
 1. Object representations

accessing a first correlation including a first one or more object representations correlated with a first one or more instruction sets for operating a first avatar of an application, wherein the first one or more object representations represent one or more objects of the application;

generating or receiving a second one or more object representations, wherein the second one or more object representations represent one or more objects of the application;

determining the first one or more instruction sets for operating the first avatar of the application based on at least partial match between the second one or more object representations and the first one or more object representations; and

Ex. 1001 ('134); Claim 1

'134: Ground 3: Buehler Does Not Disclose the Claimed Matching (Claim 1)

Response

First, the identifying disclosed in Buehler is a different concept than matching in claim 1. Buehler discloses using a visual model to *identify an object*, Ex. 1006, 7:6-15, not matching object representations. Ex. 2007, ¶¶125-127.

Next, what is being identified in Buehler's object identification is objects, whereas what is being matched in matching of claim 1 is object representations.

PO Resp. [24] at 53

Buehler

visual recognition thereof. The method includes causing a robot to execute the following steps: selecting an object in a camera field of view, using a visual model to computationally identify the object based on a stored representation thereof associated with the model, determining whether an object-specific manipulation routine is stored in association with the stored representation, and, if so, executing the object-specific manipulation routine, and if not, executing a generic manipulation routine.

Ex. 1006 at 7:6-15

'134: Ground 3: Buehler Does Not Disclose the Claimed Matching (Claim 1)

Buehler

noise or other expected image transformations. The detection algorithm **508** compares real-time camera images against the template and determines, based on a similarity metric, whether the real-time image contains the object of interest. For example, the detection algorithm may run a

Ex. 1006 at 18:50-54

'134: Ground 3: Buehler Does Not Disclose the Claimed Matching (Claim 1)

Response

Further, Petitioner points to “detection algorithm 508” used with “images” for object identification in Buehler proving that object identification is indeed object recognition or detection referred to throughout Buehler. Petition, 59. Object identification, recognition, or detection *uses image features to identify, recognize, or detect (i.e. Buehler’s “detection algorithm 508”) the object,* and does *not match object representations.* Ex. 2007, ¶¶126-127. Object identification, recognition, or detection using image features are different than matching of object representations, and nothing in Buehler and Petitioner’s contentions discloses the claimed *at least partial match between the second one or more object representations and the first one or more object representations* as required by claim 1. *Id.*

PO Resp. [24] at 53-54

'134: Ground 3: Buehler Does Not Disclose the Claimed Matching (Claim 1)

Dr. Saber's Testimony

11 Q. Okay. So you agree that the object
12 detection algorithm of Buehler identifies
13 objects by comparing a captured image to a
14 stored image template; right?

15 A. Yes. That's what -- that's what we
16 read; right?

Ex. 1023 at 111:11-16

'134: Disputed Issues – Ground 3 Anticipation (Buehler)

- Claim 1: Buehler Does Not Disclose the Claimed Object of the Application and the Claimed Matching
- **Claim 3: Buehler Does Not Disclose the Claimed Matching**
- Claim 17: Buehler Does Not Disclose the Claimed Matching, Executing, and Performing

'134: Ground 3: Buehler Does Not Disclose All the Limitations of Claim 3

Claim 3

- Claim 3 requires determining a number or percentage of partially matching **portions**.
- Claim 3 requires determining that a **number** or **percentage** of **partially matching portions** of the first and third circumstance representations exceeds a:
 1. **threshold** number or
 2. **threshold** percentage

3. The system of claim 1, wherein the determining the first one or more instruction sets for operating the first avatar of the application based on the at least partial match between the second one or more object representations and the first one or more object representations includes:
determining that a number of at least partially matching portions of the second one or more object representations and portions of the first one or more object representations exceeds a threshold number, or
determining that a percentage of at least partially matching portions of the second one or more object representations and portions of the first one or more object representations exceeds a threshold percentage.

Ex. 1001 ('134); Claim 3

'134: Ground 3: Buehler Does Not Disclose the Claimed Matching (Claim 3)

Response

representations exceeds a threshold percentage.” Ex. 2007, ¶¶129-133. As discussed above with respect to claim 1, Buehler fails to disclose matching using object representations at all, and thus Buehler fails to disclose the claimed matching of object representations based on determining that a number of at least partially matching portions of object representations or a percentage of at least partially matching portions of object representations exceeds a numerical or percentage threshold. *Id.*

PO Resp. [24] at 55

'134: Ground 3: Buehler Does Not Disclose the Claimed Matching (Claim 3)

Response

Petitioner argues that the system in Buehler “uses a threshold metric or score (i.e., a threshold number) to assess whether there is a match” of “images.” Petition, 61-62. But (i) *images in Buehler are not at least partially matching portions of object representations in claim 3*, and (ii) *generic metric or score in Buehler is not the specifically recited threshold number or threshold percentage in claim 3*, whereas *claim 3 requires both (i) and (ii)*. Ex. 2007, ¶¶ 130-133. The specifically

PO Resp. [24] at 55

'134: Ground 3: Buehler Does Not Disclose the Claimed Matching (Claim 3)

Buehler

interest. For example, the detection algorithm may run a normalized cross-correlation of the stored image template with a presently acquired image, resulting in a score for each pixel. Scores above a set threshold (e.g., the threshold determined by the learning algorithm based on anticipated noise levels etc.), may then be clustered to determine the potential location of the object in the image. To account for

Ex. 1006 at 18:54-60

'134: Ground 3: Buehler Does Not Disclose the Claimed Matching (Claim 3)

Sur-Reply

Petitioner repeats its argument that the system in Buehler uses a threshold metric or score (i.e., a threshold number) to assess whether there is a match of images. Reply, 22. But as discussed in the Response, (i) *images in Buehler are different than at least partially matching portions of object representations* in claim 3, and (ii) *the generic metric or score in Buehler is different than the specifically recited threshold number or threshold percentage* in claim, whereas claim 3 requires both (i) and (ii). Response, 54-57.

PO Sur-Reply [32] at 24

'134: Disputed Issues – Ground 3 Anticipation (Buehler)

- Claim 1: Buehler Does Not Disclose the Claimed Object of the Application and the Claimed Matching
- Claim 3: Buehler Does Not Disclose the Claimed Matching
- **Claim 17: Buehler Does Not Disclose the Claimed Matching, Executing, and Performing**

'134: Ground 3: Buehler Does Not Disclose Claim 17

Claim 1 (from which Claim 17 depends)

1. A system comprising:
one or more processors; and
one or more non-transitory machine readable media storing machine readable code that, when executed by the one or more processors, causes the one or more processors to perform at least:
accessing a first correlation including a first one or more object representations correlated with a first one or more instruction sets for operating a first avatar of an application, wherein the first one or more object representations represent one or more objects of the application;

Ex. 1001 ('134); Claim 1

'134: Ground 3: Buehler Does Not Disclose Claim 17

Claim 17

17. The system of claim 1, wherein the machine readable code, when executed by the one or more processors, causes the one or more processors to further perform at least:

modifying: the first one or more instruction sets for operating the first avatar of the application, or a copy of the first one or more instruction sets for operating the first avatar of the application, and wherein the executing the first one or more instruction sets for operating the first avatar of the application includes executing: the modified the first one or more instruction sets for operating the first avatar of the application, or the modified the copy of the first one or more instruction sets for operating the first avatar of the application, and

wherein the performing, by the first avatar of the application or by the second avatar of the application, the one or more operations defined by the first one or more instruction sets for operating the first avatar of the application includes performing, by the first avatar of the application or by the second avatar of the application, one or more operations defined by: the modified the first one or more instruction sets for operating the first avatar of the application, or the modified the copy of the first one or more instruction sets for operating the first avatar of the application.

'134: Ground 3: Buehler Does Not Disclose the Claimed Executing (Claim 17)

Sur-Reply

Petitioner contends that “a POSITA would have understood that if the user adjusts the configuration of the robot during training such that it can better perform a task, that adjustment would be used to modify the robot’s training—e.g., to modify instruction sets—such that the robot can improve its performance.” Reply, 23. This argument is conclusory and not supported by Buehler. Petitioner’s assertions of “adjusts the configuration of the robot” and “that adjustment would be used to modify the robot’s training” do not say anything about modifying any instruction sets. In fact, they do not even mention instruction sets. Furthermore, if Petitioner is referring to the virtual gripper, adjustments to the position of the gripper in a computer system are technically accomplished by issuing additional, whole, unmodified instructions to the gripper, not by modifying instructions. Ex. 2007, ¶¶135-137. Also, this is an anticipation ground and the knowledge of a POSA cannot be used to fill in the gaps in Buehler. Therefore, Petitioner has not established that Buehler discloses that the instruction sets are modified as required in claim 17.

'134: Ground 3: Buehler Does Not Disclose the Claimed Modifying (Claim 17)

Buehler

likelihood of a successful pick-up. If the virtual gripper is not positioned around the proper part of the object (as determined in step 608), the user may adjust the arm to roughly establish the proper grasp point (step 610). The robot may then fine-tune the arm location to optimize the gripper location relative to the rough grasp point on the object (step 612). This process of coarse and fine adjustments of the gripper by the human trainer and the robot, respectively, may be iterated until the user is satisfied with the grasp point and gripper orientation shown in the visual display.

Ex. 1006 at 21:54-64

'134: Ground 3: Buehler Does Not Disclose the Claimed Modifying (Claim 17)

Buehler

Thus, the robot's end-effector would undergo different motions to open a cylindrical container with a lid than it would to open a cardboard box. The robot may learn these special routines during training, and associate them with particular visual representations. Alternatively, the routines may be programmed into the robot at the outset and altered, as necessary, during training as noted above. If the robot, in

Ex. 1006 at 22:26-32

'134: Ground 3: Buehler Does Not Disclose the Claimed Executing (Claim 17)

Response

Petitioner has also not established that Buehler discloses “executing: the modified the first one or more instruction sets.” Ex. 2007, ¶¶137-138. Petitioner points to Buehler’s disclosure that “feedback is provided.” Petition, 63 (quoting Ex. 1006, 6:37-43). But *providing feedback is a different concept than executing modified instruction sets*. Ex. 2007, ¶¶137-138. Also, as discussed above, Buehler

PO Resp. [24] at 59

'134: Ground 3: Buehler Does Not Disclose the Claimed Modifying (Claim 17)

Buehler

the end-effector. Based on the display, feedback is provided to the robot, indicating whether the action is performed correctly on the display. For example, the user may provide feedback by moving a robot appendage. The display of the robot's performance of the action on the object by the end-effector and feedback are repeated until the action is performed correctly on the display. If the end-effector is a

Ex. 1006 at 22:26-32

'134: Ground 3: Buehler Does Not Disclose the Claimed Performing (Claim 17)

Response

instruction sets are performed, U.S. 2007/00134-138. In summary, Buehler cannot disclose that *an instruction set that Buehler fails to disclose as modified after correlation, learning/storing, and determining is somehow executed as modified, and that an operation defined by that instruction set that Buehler fails to disclose as modified would be performed*, as required by claim 17.

PO Resp. [24] at 60

'134: Disputed Issues – Motion to Amend

- **The Substitute Claims are Not Indefinite (§ 112)**
 - The Substitute Claims are Patentable Over Thomas and/or Thomas-Hirai (§ 103)

'134: Disputed Claim Limitation [21.1] – Definiteness

Substitute Claim 21

[21.1] wherein the second object representation includes a second data structure, and

MTA [25] at App'x 3

Substitute Claim 21

[21.c]accessing a first correlation including a first one or more object representations correlated with a first one or more instruction sets for operating a first avatar of an application, wherein the first one or more object representations represent one or more objects of the application;

MTA [25] at App'x 1

Substitute Claim 21

[21.d]generating or receiving a second one or more object representations,
wherein the second one or more object representations represent one or more
objects of the application;

MTA [25] at App'x 1

'134: Claim Limitation [21.h]

Substitute Claim 21

[21.h] wherein the first one or more object representations comprise: a first object representation that represents a first three dimensional (3D) object of the application, and a second object representation that represents a second three dimensional (3D) object of the application, and

MTA [25] at App'x 2

'134: Compare – Claim Limitation [21.e]

Substitute Claim 21

[21.e]determining the first one or more instruction sets for operating the first avatar of the application based on at least partial match between the second one or more object representations and the first one or more object representations; and

MTA [25] at App'x 1

'134: Disputed Issues – Motion to Amend

- The Substitute Claims are Not Indefinite (§ 112)
- **The Substitute Claims are Patentable Over Thomas and/or Thomas-Hirai (§ 103)**

'134: Thomas-Hirai Does Not Disclose or Suggest [SUB.1]/[21.h]

Substitute Claim 21

[21.h]wherein the first one or more object representations comprise: a first object representation that represents a first three dimensional (3D) object of the application, and a second object representation that represents a second three dimensional (3D) object of the application, and

MTA [25] at App'x 2

'134: Thomas-Hirai Does Not Disclose or Suggest [SUB.1]/[21.h]

MTA Opposition

Each of Thomas's avatars (*e.g.*, players in a sports game application) corresponds to a respective *object of the application*. See Petition, 14; TESLA-1005, 4:32-39; TESLA-1022, ¶¶76-77. A POSITA would have understood that Thomas's avatars are *three dimensional (3D) object[s] of the application, e.g.*, given the implementation of Thomas's video game in the context of the ESPN NFL 2K5 game (which has "3D" characters), as explained by Dr. Janet. TESLA-1022, ¶¶78-79 (citing TESLA-1027).

MTA Opp. [30] at 10

'134: Thomas-Hirai Does Not Disclose or Suggest [SUB.3]/[21.j]

Substitute Claim 21

[21.j] is generated at least in response to processing a type and a location of the first 3D object, and

MTA [25] at App'x 2

'134: Thomas-Hirai Does Not Disclose or Suggest [SUB.3]/[21.j]

MTA Opposition

Specifically, a POSITA would have found generation of the data structure *in response* to processing the current circumstances to be an obvious implementation design choice. As explained by Dr. Janet, data structures can be generated in advance or on demand (*e.g., in response* to an event, such as in response to processing data). TESLA-1022, ¶91. There is nothing unexpected or unpredictable about either of these approaches, and a POSITA would thus have found this claimed element to be obvious. *See In re Kuhle*, 526 F.2d 553, 555 (CCPA 1975); *In re Chu*, 66 F.3d 292, 298-99 (Fed. Cir. 1995).

MTA Opp. [30] at 15

Substitute Claim 21

[21.j] is generated at least in response to processing a type and a location of the first 3D object, and

MTA [25] at App'x 2

'134: Thomas-Hirai Does Not Disclose or Suggests [SUB.3]/[21.j]

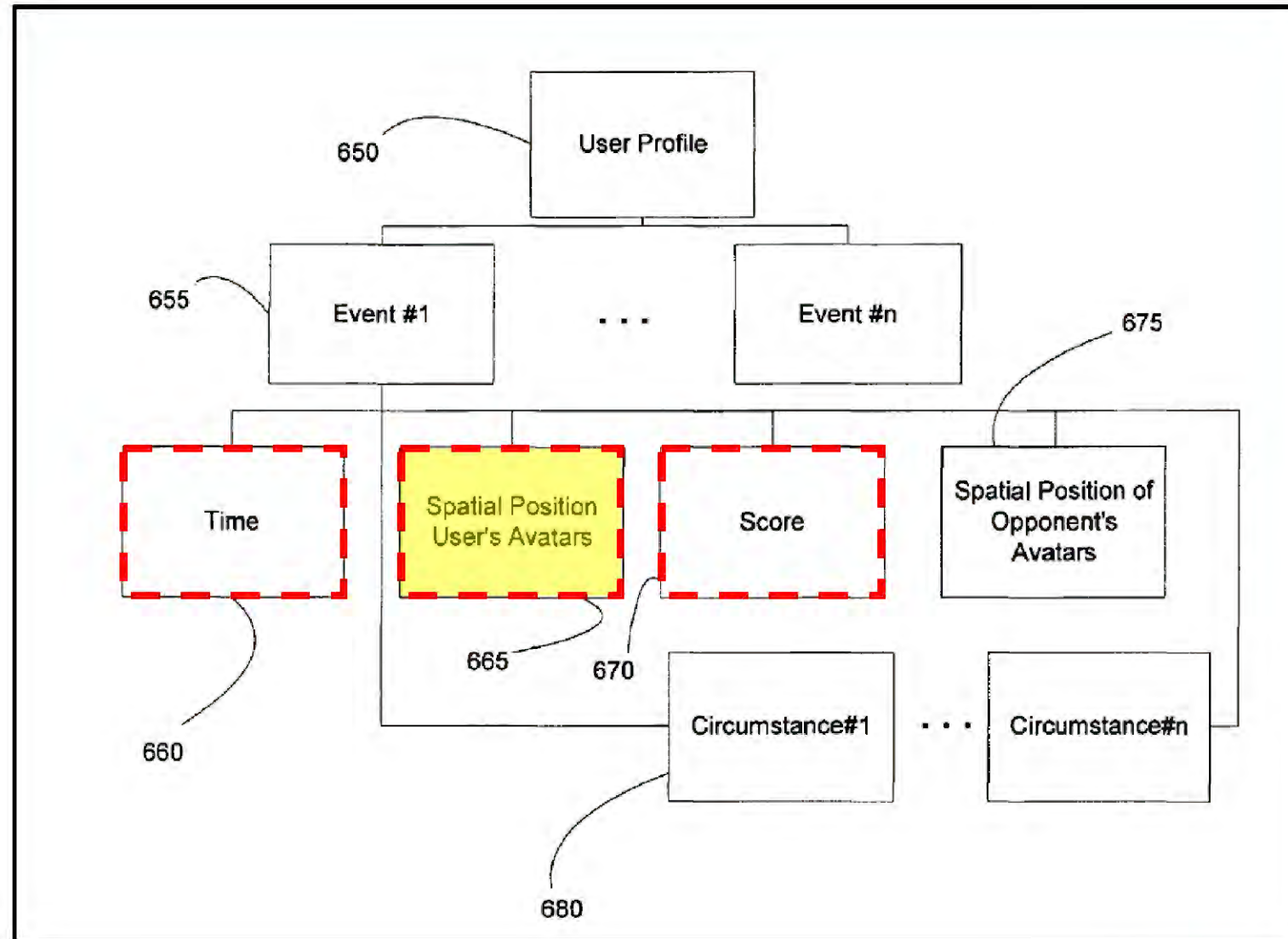


“[The expert’s] testimony primarily consisted of conclusory references to [their] belief that one of ordinary skill in the art *could* combine these references, not that they *would* have been motivated to do so..”

InTouch Techs., Inc., v. VGO Comm’ns, Inc., 751 F.3d 1327, 1352 (Fed. Cir. 2014)

'134: Thomas-Hirai Does Not Disclose or Suggest [SUB.3]/[21.j]

Thomas



Ex. 1005 at FIG. 4

'134: Thomas-Hirai Does Not Disclose or Suggest [SUB.6]/[21.m]

Substitute Claim 21

[21.m] wherein the first data structure and the second data structure are correlated with the first one or more instruction sets for operating the first avatar of the application.

MTA [25] at App'x 3

'134: Thomas-Hirai Does Not Disclose or Suggest [SUB.6]/[21.m]

MTA Opposition

The *first and second data structures* store parameters that define a situation/current circumstance corresponding to an event (*see* TESLA-1005, 4:23-24 (“Each event 685 and situation 655 are defined by a set of one or more parameters”), where the situation and/or event are *correlated with the instruction sets, e.g.,* user inputs. *See* Petition, 28-31; TESLA-1005, Abstract, 5:9-13 (“when a user responds to an event, the user’s response, when recorded, is not only associated with the occurrence of that event, but also with the situation during the occurrence of that event, which is defined by one or more current circumstances”), FIG. 3a, 4:60-5:4; TESLA-1022, ¶¶113-114.

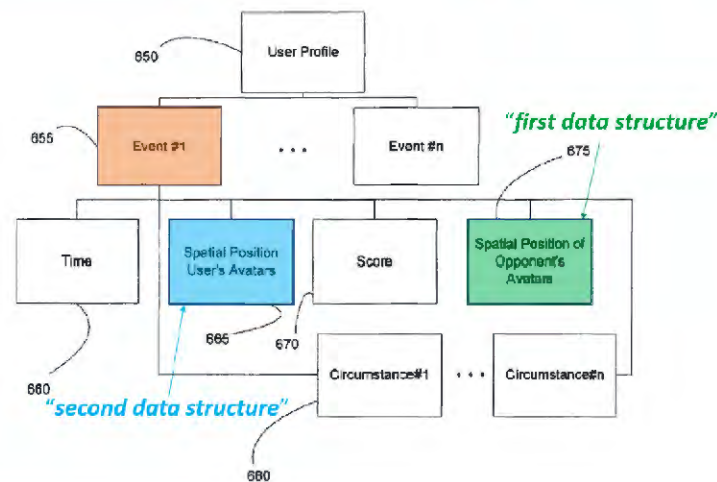
MTA Opp. [30] at 24

'134: Thomas-Hirai Does Not Disclose or Suggest [SUB.6]/[21.m]

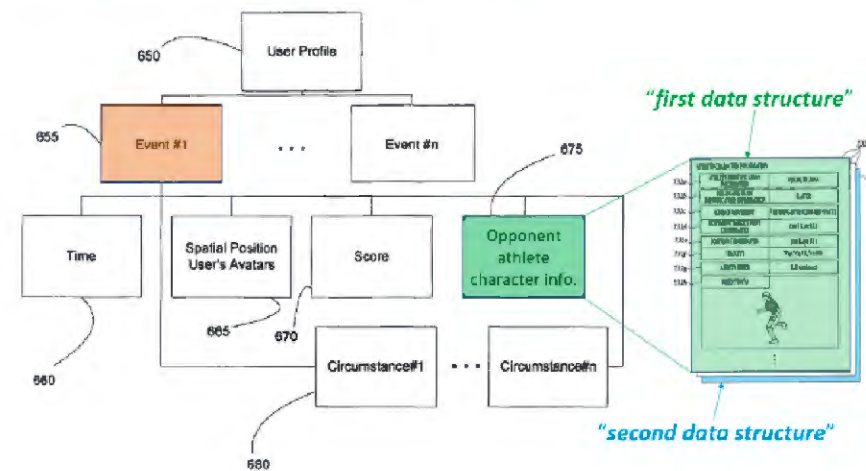
MTA
Opposition

The characterization of a second opposing-team avatar (the *second object representation*) includes a portion of the fields/sub-profile 675 that stores parameters for that second opposing-team avatar (*a second data structure*). See [SUB.2], *supra*; TESLA-1022, ¶¶108-110.

Alternatively/ additionally, Thomas's fields/subprofile 665 (a *data structure*; see [SUB.2], *supra*) stores parameters characterizing user-controlled avatars, e.g., their "spatial position." TESLA-1005, 4:31-33. The characterization of the user-controlled avatar (the *second object representation*) includes the fields/subprofile 665 (*second data structure*), blue *infra*. TESLA-1022, ¶111.



Alternatively/ additionally in the Thomas-Hirai combination, Thomas's sub-profile 675 characterizing opposing-team avatars is implemented such that parameters characterizing each opposing-team avatar are stored in respective "athlete character information" data structures, as illustrated *infra*. TESLA-1025, 13:44-55; TESLA-1022, ¶112. The "athlete character information" characterizing a second opposing-team avatar (*second object representation*) corresponds to a *second data structure*, blue *infra*. TESLA-1022, ¶112.



MTA Opp. [30] at 22-24

'134: Thomas-Hirai Does Not Disclose or Suggest [SUB.6]/[21.m]

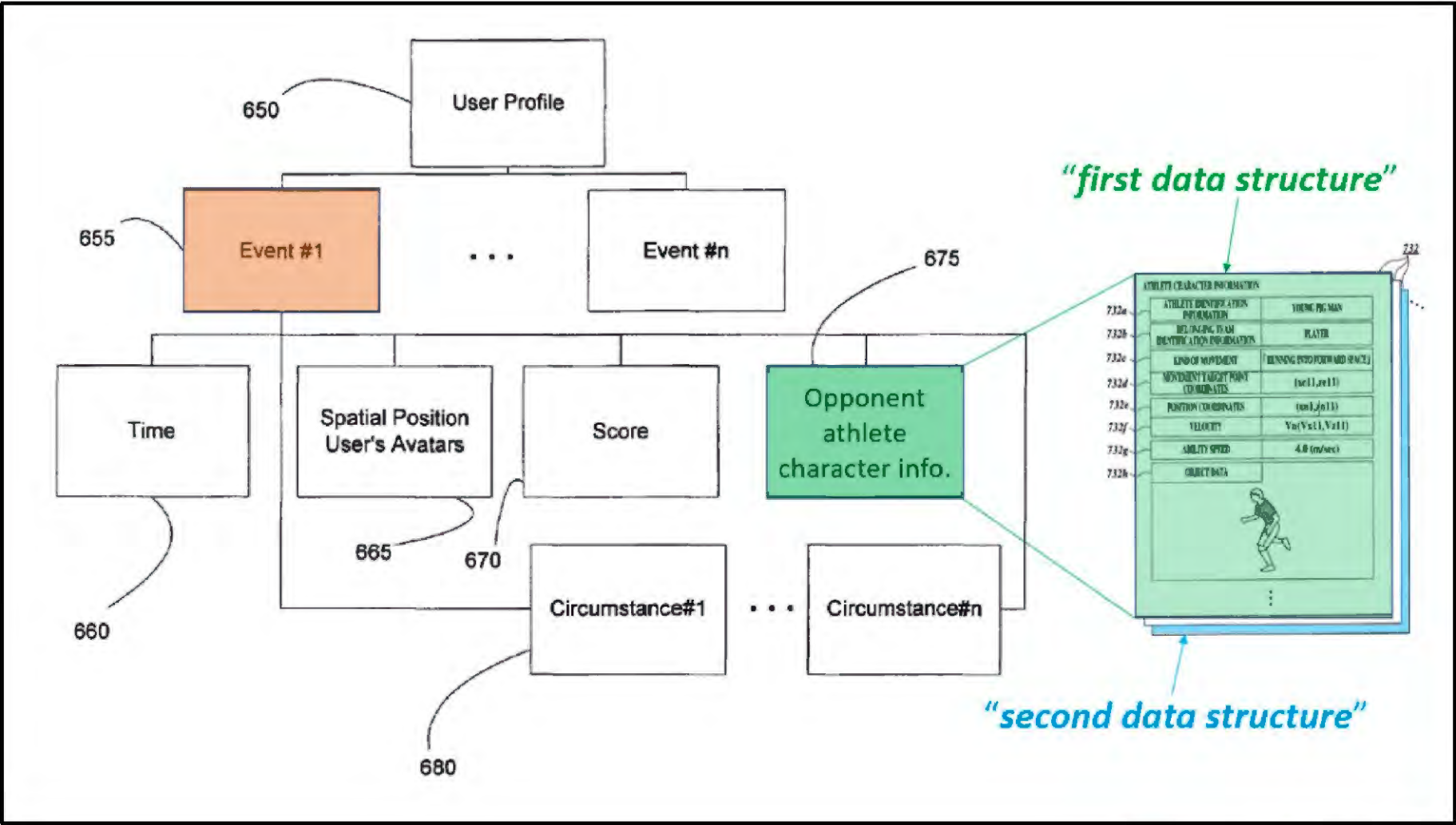
MTA Sur-Reply

occurrence of that event'). Indeed, this correlation is illustrated unambiguously in the composite figure generated in the Opposition and reproduced again *infra*, which shows a correlation between first and second data structures (green and blue, respectively) representing two opposing-team avatars (*i.e.*, object representations) and an event, shown in orange (*i.e.*, the one or more instruction sets). *See* Opposition, 28; *see also id.*, 27 (annotating FIG. 4 of Thomas).

MTA Sur-Reply [38] at 12

'134: Thomas-Hirai Does Not Disclose or Suggest [SUB.6]/[21.m]

MTA Sur-Reply



MTA Sur-Reply [38] at 12

'134: Thomas-Hirai Does Not Disclose or Suggest [SUB.6]/[21.m]

Petition

Ex. 1005, 3:53-61. The stored data includes the user's input for controlling an avatar in the computer program (i.e., an instruction set for operating an avatar object of an application program) in association with the surrounding circumstances or situation. *Id.*, 5:7-13 (“[T]he data recorded can be associated with both an event and a situation...[T]he user's response, when recorded, is not only associated with the occurrence of that event, but also with the situation during the occurrence of that event, which is defined by one or more current circumstances.”); *see also id.* 4:67-

Pet. [1] at 11