

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

TESLA, INC.,
Petitioner

v.

AUTONOMOUS DEVICES, INC.,
Patent Owner

Case IPR2023-01055
Patent 11,238,344

**PETITIONER'S SUR-SUR-SUR-REPLY IN OPPOSITION TO PATENT
OWNER'S MOTION TO AMEND**

TABLE OF CONTENTS

I.	INTRODUCTION.....	1
II.	PO FAILS TO SHOW THAT PETITIONER’S MTA SUR-REPLY RAISED IMPERMISSIBLY NEW ARGUMENTS	1
III.	PO FAILS TO REBUT PETITIONER’S SHOWING IN THE OPPOSITION AND MTA SUR-REPLY THAT THE SUBSTITUTE CLAIMS ARE UNPATENTABLE.....	3
A.	Section 101 – The Substitute Claims are Directed to an Ineligible Abstract Idea.....	3
B.	Section 103 – The Grotmol-Hickman Combination	5
1.	The MTA Sur-reply’s discussion of Hickman’s combined data structures and Figure 5 was properly presented.....	5
2.	GHC renders [21.10] and [21.13] obvious	6
3.	GHC renders [21.11] and [21.14] obvious	9
4.	GHC renders [21.15] obvious	9
C.	Section 103 – The Grotmol-Tolstedt Combination.....	10

I. INTRODUCTION

After numerous deficiencies in Patent Owner's MTA Reply were exposed in Petitioner's MTA Sur-reply and at the oral hearing, PO obtained authorization to file a Sur-sur-reply to address issues raised in Petitioner's prior paper. Paper, 43. But the MTA Sur-sur-reply merely advances (i) the same unfounded procedural complaints that PO already raised at the oral hearing and (ii) new substantive arguments against Petitioner's §§ 101 and 103 grounds, many of which are in no way dependent on the arguments raised in Petitioner's MTA Sur-reply and which PO could have raised earlier in its MTA Reply. Regardless, PO has now been afforded ample opportunity to address the MTA Sur-reply both at the hearing and in its own Sur-sur-reply. PO's process arguments are thus baseless and moot, and its new substantive arguments are waived and meritless. For each of the reasons described in Petitioner's Opposition, MTA Sur-reply, at the hearing, and here, the Board should find the PO's Substitute Claims unpatentable and deny the MTA.

II. PO FAILS TO SHOW THAT PETITIONER'S MTA SUR-REPLY RAISED IMPERMISSIBLY NEW ARGUMENTS

As an initial matter, PO's MTA Sur-sur-reply includes numerous allegations of new arguments impermissibly raised in Petitioner's MTA Sur-reply. *See* Paper 44, 1, 4, 6, 8-9. But these allegations appear rooted in the erroneous assumption that a reply (or sur-reply) cannot fairly respond to arguments with additional explanation/evidence/citations that further develop the disputed issues—even

where, as here, the responsive arguments do not advance a “meaningfully distinct [invalidity] contention.” *Rembrandt Diagnostics, LP v. Alere, Inc.*, 76 F.4th 1376, 1379 (Fed. Cir. 2023). PO has identified no instance in which the Sur-reply advanced an entirely new theory distinct from the Opposition. Nor could it.

Even if the Board were concerned with the possibility of new arguments in the Sur-reply (of which there were none), those concerns should be allayed by the due process and fair opportunity that PO has been afforded to respond both at the oral hearing and in its MTA Sur-sur-reply. Indeed, the Board granted PO’s request for its Sur-sur-reply in full. Paper 43. PO also could have moved to strike or raise other objections to the Sur-reply in the weeks before the hearing, but did not. There can thus be no credible argument of prejudice.

Moreover, PO’s myopic focus on the adversarial process wrongly ignores the public interest at stake in a motion to amend. This interest is reflected in the Board’s independent authority to consider the entire record of the proceeding and the Board’s charge to “ensure that patent monopolies are kept within their legitimate scope,” particularly in the context of a motion to amend. *Hunting Titan, Inc. v. DynaEnergetics Eur. GmbH*, 28 F.4th 1371, 1381 (Fed. Cir. 2022) (“[W]hile the adversarial system proves useful in IPR proceedings to bring forth evidence the agency might not have otherwise discovered, the Panel’s substantial reliance on the adversarial system as the basis for confining its patentability determination for new

claims overlooks the basic purpose of IPR proceedings: to ... ensure ‘that patent monopolies are kept within their legitimate scope.’”) (internal citations omitted); 37 C.F.R. § 42.121(d)(3) (effective October 18, 2024).

III. PO FAILS TO REBUT PETITIONER’S SHOWING IN THE OPPOSITION AND MTA SUR-REPLY THAT THE SUBSTITUTE CLAIMS ARE UNPATENTABLE

A. Section 101 – The Substitute Claims are Directed to an Ineligible Abstract Idea

At the core of PO’s allegations of new arguments is the incorrect notion that Petitioner cannot introduce new evidence or explanations in its reply. Consistent with this flawed understanding of the law, PO alleges that Petitioner’s reliance on the *Intellectual Ventures I* case is impermissible new argument. Paper 44, 1.

Petitioner’s MTA Sur-reply (Paper 38) includes the same argument (namely, that the substitute claims recite patent ineligible subject matter under 35 USC 101) as Petitioner did in its Opposition (Paper 31). Consistent with *Rembrandt Diagnostics*, Petitioner did not offer a new invalidity theory in its MTA Sur-reply but expanded on previously-raised 101 arguments and responded to PO’s patent-eligibility arguments. Paper 34, 1-2; Paper 38, 9. Thus, PO’s allegations of new argument are incorrect and are inconsistent with the law.

PO’s attempt to distinguish its claims from the claims in *Intellectual Ventures I* and establish patent eligibility are similarly flawed. Beyond merely repeating its attorney arguments that its claims are supposedly rooted in computer technology,

PO fails to address that its substitute claims recite nothing more than generic computer components such as “a computing system that includes one or more processor circuits,” “a memory that stores at least a knowledgebase,” “one or more sensors,” and a “first device.” Indeed, PO’s Sur-sur-reply does not identify a single non-generic computer component. Again, PO elected not to depose Dr. Janet on the testimony he submitted in support of Petitioner’s § 101 rejection and elected not to submit any other evidence with its MTA Reply, leaving Petitioner’s evidence entirely un rebutted. No record evidence supports PO’s attorney arguments that the substitute claims recite anything non-conventional or drawn to a technological improvement.

Moreover, PO’s generic computer components are recited alongside other generic computer tasks, such as generating or receiving circumstance representation and accessing memory. Even operations such as learning instruction sets or anticipating or correlating instructions—touted by the PO as purportedly being patent eligible—amount to nothing more than applying an abstract idea (mental process) to a computer, e.g., a user can anticipate making a right turn at a particular intersection (instructions) based on past experiences or learn that a user has to stop at a traffic light (instructions). Petitioner’s reliance on the *AI Guidance* is further evidence of the patent ineligibility of the substitute claims even when these claims recite generic computer components.

B. Section 103 – The Grotmol-Hickman Combination

1. The MTA Sur-reply’s discussion of Hickman’s combined data structures and Figure 5 was properly presented

PO incorrectly asserts that “Figure 5 at page 2 of the MTA Sur-reply and associated text constitute impermissible new argument.”¹ Paper 44, 4-6. As a preliminary matter, Hickman’s teachings regarding the ability to combine its various databases were repeatedly referenced in the Opposition. For example, the Opposition specifically notes that “Hickman explains that the knowledge base has flexibility in design and the various knowledge bases can be combined into one knowledge base” TESLA1005, 10:57-11:7; TESLA1010, ¶¶74-75.” Paper 31, 14. In the mapping of elements [21.9]-[21.14] (which include claim features related to the “first data structure” and “second data structure”) and in explaining the Grotmol-Hickman combination (GHC), the Opposition repeats part of this statement verbatim and states “[r]ecall, also that Hickman teaches that the various knowledge bases can be combined into one knowledge base or distributed over the computer system” citing to the same portion (10:57-11:7) of Hickman. Paper 31, 21, 15 (“the choice to store data in one combined knowledge base or multiple knowledge bases,

¹ The caption of the figure on page 2 of Petitioner’s MTA Sur-reply includes a typographical error. “FIG. 5” should be “FIG. 3” as is evident from the accompanying remarks in Petitioner’s MTA Sur-reply.

was well-known, as disclosed by Hickman”), 16 (“In some GHC implementations, multiple data fields could be combined if multiple knowledge bases are combined”), 22 (“knowledge base 306 (including a combination of knowledge bases”). Petitioner’s MTA Sur-reply merely illustrated this concept with the figure on page 2 to highlight and further explain the teachings from Hickman that were cited in the Opposition, responsive to points raised in the Preliminary Guidance (Paper 32 or “PG”) and PO’s MTA Reply (Paper 34). *See e.g.*, PG, 8; Paper 34, 8. Thus, consistent with *Rembrandt Diagnostics*, Petitioner’s remarks in the MTA Sur-reply are firmly within the permissive bounds of a reply because they merely expand on previously raised arguments and respond to PO’s assertions without advancing a meaningfully distinct invalidity contention.

2. GHC renders [21.10] and [21.13] obvious

PO argues that GHC does not render obvious [21.10] and [21.13] because Hickman’s system “always operates on a single object” and has “no concept of a *multi-object* circumstance.” Paper 44, 4-5. PO’s arguments fail for several reasons. First, as indicated by the lack of citations in Paper 44, there is no support in Hickman for PO’s mischaracterization of Hickman being limited to a single object, nor is there support for PO’s assumption that “each row in Hickman’s tables represents an object from a *different* circumstance.” *Id.* To the contrary, the record confirms that Hickman is not limited to a single object and instead has a broad application to

multiple objects. For instance, Hickman teaches that “the shared robot knowledge base 55 includes data about *a vast number of various objects that robots may encounter and/or interact with in their everyday environments*” and “[d]ata about *any object* that that a robot *might encounter or interact with* may be included in the shared robot knowledge base.” TESLA1005, 2:48-3:8. Such disclosure does not limit or suggest that the knowledge base in either Hickman or GHC would operate only on a single object.

PO’s argument is also flawed insofar as it attacks Hickman’s teachings alone without addressing its integration in the Grotmol-Hickman combination. *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co., Inc.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986) (holding that non-obviousness cannot be established by attacking references in a combination individually). When Hickman’s teachings are taken alongside Grotmol’s in the combination, PO’s argument completely falls apart. For instance, Grotmol expressly teaches that its system can perform “object recognition, and/or obstacle avoidance” to “provide information associated with *objects* within the field-of-view 168” using its sensor component 166. TESLA1004, 8:57-9:40. Grotmol’s first circumstance representation includes multiple *objects*. Paper 34, 19-20. Hickman discloses that a “robot client 118 *may collect data via one or more sensors*, and upload the data to the cloud computing system 102.” TESLA1005, 6:60-67, 10:41-56; Paper 34, 20.

As Petitioner previously explained, it would have been obvious to a POSITA for GHC's system to store information regarding the multiple objects identified in images 2000 and 2010 from Grotmol's FIG. 20A in a combined knowledgebase like that disclosed in Hickman, which similarly provided entries (e.g., data structures) for multiple objects. Paper 31, 19-23, Paper 38, 2-3, 5-6.

PO also argues that Petitioner effectively admitted that Grotmol does not disclose [21.10] and [21.13] because the Opposition points to disclosure in Hickman for these features. Paper 44, 6. Not so. Both the Opposition and Petitioner's MTA Sur-reply explain how at least Hickman teaches these features. Paper 31, 19-23; Paper 38, 1-4. For example, Hickman describes processing digital pictures to detect object attributes such as size/type/location, which is how object information in Hickman's knowledge bases are populated. *See, e.g.*, EX1005, 3:8-11, 3:16-26, 3:46-55, 5:7-12, 10:53-56, 11:7-8, 11:20-30, 25:24-46, 25:55-58 ("conclusion that the object 405 is a cup of coffee may be based on the size ... of the cup"), Abstract, FIG. 4; *cf.*, EX1001, 69:34-51 ('344 patent describing techniques for indirectly detecting object properties through the processing of digital pictures, such as recognizing an object from a picture and subsequently obtaining object properties associated with the recognized object from other sensors or stored information); *see also* , 73:37-63. Further, responsive to PO and PG's arguments, Petitioner's MTA Sur-reply explains that Grotmol, like Hickman, teaches robots that detect and send

information including object location and size information, thereby rendering obvious the detection of size and location in GHC. Paper 38, 3-4; Paper 34, 4-6; Paper 32, 7-9. In addition, the disclosure of Hickman should not be treated in isolation, as PO would have the Board do.

3. GHC renders [21.11] and [21.14] obvious

PO's improperly argues for the first time in its MTA Sur-sur-reply that [21.11], [21.14] are not obvious based on the incorrect assertion that Hickman's MOD is a model number. Paper 44, 6-7. But Hickman describes MOD broadly as "data associated with a particular model." EX1005, 17:20-18:3. PO's argument is also irrelevant or incorrect because PO does not address Petitioner's mapping that the *combination* of MOD and specification data (SPC) corresponds to a computer model, not just the MOD alone. Paper 31, 21-22.

4. GHC renders [21.15] obvious

Like features [21.10] and [21.13] above, PO attacks the references individually and alleges that only Hickman was mapped to [21.15]. Paper 44, 7. But both the Opposition and Petitioner MTA Sur-reply cite to both Grotmol (TESLA1004) and Hickman (TESLA1005) and discuss how GHC renders this feature obvious. Paper 31, 19-24; Paper 38, 1-4. Because PO's Reply failed to appreciate the relevance of the Grotmol citations, the GHC combination and its mapping in the Opposition, the Petitioner MTA Sur-reply provided further

explanations without modifying its theory. Paper 31, 51-52; Paper 38, 5-7. For instance, the Petitioner MTA Sur-reply explained how motor commands sent to the robot correspond to the instruction sets and that “in GHC, each of the data structures that store data for different objects depicted in the same image for the same training set also would be correlated with the same motor command indications.” Paper 38, 5-6. While MTA Sur-reply includes additional citations, the same invalidity theory and mapping are included in both papers.

PO’s remaining arguments, e.g., the “first” and “second” arguments, with respect to [21.15] are similar to the arguments advanced with respect to [21.10] and [21.13], which fail for the reasons noted above. PO also makes blanket assertions that a paragraph on page 6 and certain portions of page 7 of the Petitioner MTA Sur-reply are impermissible new arguments without providing any explanation. Such bald and unsupported assertions should be dismissed.

C. Section 103 – The Grotmol-Tolstedt Combination

Petitioner’s comments regarding “identifying attributes ...” and the paragraph beginning with “Moreover” were made in response to the PG and PO’s Reply, as expressly noted in the Petitioner MTA Sur-reply. Paper 38, 8-9; Paper 44, 9. PO fails to refute Petitioner’s showing in the Opposition and the MTA Sur-reply that GTC renders the substitute claims obvious.

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Respectfully submitted,

Dated October 30, 2024

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CERTIFICATION UNDER 37 CFR § 42.24(d)

Under the provisions of 37 CFR § 42.24(d), the undersigned hereby certifies that the page count for the foregoing Petitioner's Sur-sur-sur-reply to Patent Owner's Motion to Amend totals 10 pages, which is equal to the page number authorized by the Board in Paper 43.

Respectfully submitted,

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CERTIFICATE OF SERVICE

Pursuant to 37 CFR §§ 42.6(e)(1) and 42.6(e)(4)(iii), the undersigned certifies that on October 30, 2024, a complete and entire copy of this Petitioner's Sur-sur-sur-reply to Patent Owner's Motion to Amend was provided via email to the Patent Owner by serving the email correspondence addresses of record as follows:

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