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

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/906,393	09/15/2022	RYOICHI TSUZAKI	SYP334627US01	9574

108359   7590   01/17/2025

CHIP LAW GROUP
505 N. LAKE SHORE DRIVE
SUITE 250
CHICAGO, IL 60611

EXAMINER
KHAYER, SOHANA T

ART UNIT	PAPER NUMBER
3657	

NOTIFICATION DATE	DELIVERY MODE
01/17/2025	ELECTRONIC

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

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

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

docketing@chiplawgroup.com
eofficeaction@appcoll.com
sonydocket@evalueserve.com

	Application No.	Applicant(s)
	17/906,393	TSUZAKI, RYOICHI
Office Action Summary	Examiner	Art Unit	AIA (FITF) Status
	SOHANA T KHAYER	3657	Yes

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

Period for Reply

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

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

Status

1)☑ Responsive to communication(s) filed on <u>12/17/2024</u>.
  ☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.
2a)☑ This action is **FINAL.**   2b) ☐ This action is non-final.
3)☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.
4)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims*

5) ☑ Claim(s) <u>1-10</u> is/are pending in the application.
  5a) Of the above claim(s) _____ is/are withdrawn from consideration.
6) ☐ Claim(s) _____ is/are allowed.
7) ☑ Claim(s) <u>1-5 and 7-10</u> is/are rejected.
8) ☑ Claim(s) <u>6</u> is/are objected to.
9) ☐ Claim(s) _____ are subject to restriction and/or election requirement

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

Application Papers

10)☐ The specification is objected to by the Examiner.
11)☑ The drawing(s) filed on <u>1-10</u> is/are: a)☑ accepted or b)☐ objected to by the Examiner.
  Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
  Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

12)☑ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 Certified copies:
  a)☑ All b)☐ Some** c)☐ None of the:
   1.☑ Certified copies of the priority documents have been received.
   2.☐ Certified copies of the priority documents have been received in Application No. _____.
   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

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

Attachment(s)

1) ☑ Notice of References Cited (PTO-892)   3) ☐ Interview Summary (PTO-413)
                          Paper No(s)/Mail Date _____.
2) ☐ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b) 4) ☐ Other: _____.
  Paper No(s)/Mail Date

DETAILED ACTION

Remarks

1.   This Final office action is in response to the amendments filled on 12/17/2024. Claims 1-

7 and 9-10 are amended. Claims 1-10 are pending and examined below.

Notice of Pre-AIA or AIA Status

2.   The present application, filed on or after March 16, 2013, is being examined under the

first inventor to file provisions of the AIA.

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103 which forms the basis for all obviousness

rejections set forth in this Office action:

> A patent for a claimed invention may not be obtained, notwithstanding that the claimed invention is
> not identically disclosed as set forth in section 102, if the differences between the claimed invention
> and the prior art are such that the claimed invention as a whole would have been obvious before the
> effective filing date of the claimed invention to a person having ordinary skill in the art to which the
> claimed invention pertains. Patentability shall not be negated by the manner in which the invention
> was made.

4.   Claim(s) 1, 2, 4, 9 and 10 is/are rejected under 35 U.S.C. 103 as being unpatentable over

US 2020/0117214 ("Jonak"), and further in view of US 2018/0281191 ("Sinyavskiy").

5.   **Regarding claim 1 (and similarly claim 9 and 10),** Jonak discloses **a control apparatus**

for a robot (see at least [0028], where "The computing hardware 110 is configured to control a

robot traversal system 116")**, comprising:**

      a central processing unit (CPU) configured to (see at least fig 5)**:**

      create a ~~cost~~ map for each gait of multiple gaits of the robot, to allow selection from

among the multiple gaits (*for the examination purposes gait is interpreted as footstep.* See

Jonak at least [0028], where "the behavior system 102 controls different footstep patterns, leg

patterns, body movement patterns, or vision system sensing patterns."; *robot is controlled at*

different footstep/leg patterns. So, multiple gaits are available and one gait is selected out of

many available gaits. See also [0012], where "The method includes receiving…image data of an

environment about a robot maneuvering in the environment. The method also includes

executing…an iterative closest points (ICP) algorithm configured to localize to a first waypoint of

a waypoint map based on the received image data."; see also fig 3 and fig 4. *Waypoint map is*

interpreted as map. Per submitted specification of the current application, cost map is a travel

cost for each gait. The cost maps are generated based on land form, stepped place, an obstacle

on the road etc. Wheel cannot ride over stepped place so high travel cost for wheel gait

compares to a walking gait, an obstacle on the road will give high travel cost, see at least [0079]

and [0095] of PGPUB of submitted specification.)**;**

create a path for the robot __based on__ **the** __created__ ~~cost~~ __map for each gait of the multiple__

__gaits, wherein the path includes a gait switching point__ (see at least [0012], where "a traversal

path from the first waypoint of the waypoint map to a second waypoint of the waypoint map

and updating…a localization to the second waypoint of the waypoint map"; see also [0027],

where "The robotic environment 10 generally refers to a spatial area associated with some type

of terrain that may be traversed by a robot 100 according to a map 200. For example, the

terrain is an urban terrain, such as buildings, streets, sidewalks, parks, alleys, stairs, ramps,

tunnels, etc., a rural terrain, such as roads, fields, hills, mountains, caves, etc., a subterranean

terrain, such as caves, tunnels, etc., or any combination thereof. The robot 100 includes

locomotion based structures such as legs and/or wheels attached to a body that enable the

robot 100 to move about the robotic environment 10."; see also [0034], where "the

robot 100 may autonomously navigate the robotic environment 10 using the map 200"; *gait*

switching is interpreted as changing footstep. Jonak discloses a system wherein the robot

autonomously travels through an environment. The environment includes roads, hills, stairs,

ramps etc. In order to travel through that kind of environment, the robot is required to switch

gait. E.g., the gait is different on a stair compare to the road.)**; and**

      control the robot to switch a gait at the gait switching point on the created path (see

at least [0028], where "The behavior system 102 is generally responsible for controlling (i.e.,

executing) behaviors of the robot 100. For example, the behavior system 102 controls different

footstep patterns, leg patterns, body movement patterns, or vision system sensing patterns.

The robot traversal system 116 operates the behavior system 102 based on at least one

map 200 provided to the robot traversal system 116.")**.**

      Jonak does not disclose the following limitation:

      create a cost map for each of <u>gait</u> of <u>multiple</u> gaits.

      However, Sinyavskiy discloses a system wherein **create a cost map for each of <u>gait</u> of**

<u>multiple</u> gaits (see at least [0024], where "generate a cost map associated with an environment

of the robot"; See also fig 4; see also [0121], where "there can be a plurality of actuators

controlling various DOFs of robot 200, whether robot 200 is a robotic arm, multi-

wheel vehicle, walking robot, and/or any other robot.". *Sinyavskiy discloses a system that*

determine cost map for robot movement (for a particular gait). Since robot is moving there is a

gait of the robot. Sinyavskiy also discloses that the robot could be walking robot or wheeled

robot. It is obvious to determine cost map for various gaits. Sinyavskiy does not limit to create

cost map for a specific gait.)**.**

DOCKET ALARM

Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts

Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research

With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips

Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS
Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS
Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS
Sync your system to PACER to automate legal marketing.

fastcase
Smarter legal research.