SOFTWARE COPYRIGHT REGISTRATION CERTIFICATE

SOFTWARE COPYRIGHT REGISTRATION CE

POLARPATH(TM) NAVIGATION SYSTEM

Registration Number: TXu-2-789-341

Effective Date of Registration: September 15, 2023

CERTIFICATE OF REGISTRATION

This Certificate of Registration is issued under the seal of the United S

Copyright Office in accordance with Title 17, United States Code. The

registration certifies that the application, deposit, and fee have been r
and registered by the Copyright Office.

REGISTRATION DETAILS

1. Title of Work

PolarPath(TM) Navigation System v3.2.1

Alternative Title: PolarPath Navigation Suite

2. Copyright Claimant

Polar Dynamics Robotics, Inc.

4200 Arctic Way, Suite 300

Wilmington, DE 19801

3. Nature of Authorship

Computer program, including source code, object code, and associate
documentation and user interfaces.

4. Author Information

1. Author: Polar Dynamics Robotics, Inc.

2. Work made for hire: Yes

3. Citizenship: United States Corporation

4. Domicile: Delaware, United States

5. Year of Completion

2023

6. Date of First Publication

7. Program Description

The PolarPath(TM) Navigation System is a proprietary software suite autonomous mobile robots operating in extreme cold environments. T includes:

1. Core Navigation Module

- Thermal-compensated pathfinding algorithms
- Sub-zero performance optimization routines
- Multi-sensor fusion processing
-

Real-time obstacle avoidance systems

2. Environmental Adaptation Components

-

Temperature-specific calibration protocols

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Frost detection and compensation algorithms

-

Cold-weather performance monitoring

-

Emergency thermal shutdown procedures

3. Integration Interfaces

-

BlueCore(TM) technology platform integration

- Fleet management system compatibility
- Remote monitoring capabilities
- Data logging and analytics

8. Excluded Material

The following third-party components are excluded from this registrati

- Standard Linux kernel modules
- Open-source ROS (Robot Operating System) components
- PostgreSQL database engine

Third-party sensor drivers

9. Deposit Material

1. Source code files deposited: 847

2. Total lines of code: 426,531

3. Programming languages: C++, Python, Java

4. Documentation: Technical specifications, API documentation, user

10. Special Handling

None requested

11. Certification

The undersigned hereby certifies that:

1. The information provided in this application is correct to the best of

2. The deposited material contains copyrightable subject matter under

3. The claimant is the owner of all rights in the work being registered.

4. This registration covers only the computer program described herei

EXECUTION

IN WITNESS WHEREOF, this Copyright Registration Certificate has b
a duly authorized representative of the Copyright Office on the date in
below.

Registered and Sealed this 15th day of September, 2023

/s/ Maria Rodriguez

Maria Rodriguez

Registration Specialist

United States Copyright Office

OFFICIAL ANNOTATIONS

Registration Decision Date: September 15, 2023

Effective Date of Registration: September 15, 2023

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COPYRIGHT OFFICE NOTES

This certificate of registration constitutes prima facie evidence of the validity of the copyright and of the facts stated in the certificate when

introduced in any judicial proceedings under section 410(c) of title 17, United States Code.

RECORDATION

Recorded in the Copyright Office records

Volume: 12847

Page: 341-344

Date: September 15, 2023