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PTO/SB/16 (8-00)

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### PROVISIONAL APPLICATION FOR PATENT COVER SHEET

This is a request for filing a PROVISIONAL APPLICATION FOR PATENT under 37 CFR 1.53(c).

INVENTOR(S)								
Given Name (first and middle [if a	or Surname	(City and		esidence State or Foreign Country)				
in c	Jan		(Sity and					
Joseph L. Jones			Acton, MA					
Additional inventors are being named on the separately numbered sheets attached hereto								
TITLE OF THE INVENTION (280 characters max)								
Multi-Mode Coverage for an Autonomous Robot								
Direct all correspondence to:	Direct all correspondence to: CORRESPONDENCE ADDRESS							
Customer Number	Customer Number ——							
OR T	Type Customer Number here							
Firm <i>or</i> Individual Name	Glen D. Weinstein							
Address	Twin City Office Center, Suite 6							
Address	22 McGrath Highway							
City	Somerville State MA				02143			
Country	USA				617.629.0126			
	ENCLOSED APPLICA	TION PARTS	(check all that appl)	(N)				
Specification Number of P	Pages 22	ſ	CD(s), Number					
Drawing(s) Number of She	eets q	_	Other (and if A					
Application Data Sheet. See	e 37 CFR 1.76	L	Other (specify)	_				
METHOD OF PAYMENT OF FILI	ING FEES FOR THIS PRO	VISIONAL AP	PLICATION FOR PA	\TENT				
Applicant claims small en	ntity status. See 37 CFR 1.2	27.			FILING FEE			
l —	is enclosed to cover the filir	•			AMOUNT (\$)			
	reby authorized to charge file  syment to Deposit Account I		01806		\$75.00			
fees or credit any overpayment to Deposit Account Number: 501806 \$75.00 Payment by credit card. Form PTO-2038 is attached.								
The invention was made by an agency of the United States Government or under a contract with an agency of the United States Government.								
No.								
Yes, the name of the U.S. Government agency and the Government contract number are:								
Respectfully submitted,								
SIGNATURE // /			REGISTRATION NO. 43,981					
TYPED or PRINTED NAME Glen		(if appropriate) Docket Number:  DP - 5						
TELEPHONE 617.629.0055								

### USE ONLY FOR FILING A PROVISIONAL APPLICATION FOR PATENT

This collection of information is required by 37 CFR 1.51. The information is used by the public to file (and by the PTO to process) a provisional application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 8 hours to complete, including gathering, preparing, and submitting the complete provisional application to the PTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, Washington, D.C. 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Box Provisional Application, Assistant Commissioner for Patents, Washington, D.C. 20231.





#### In the United States Patent and Trademark Office

Mailed: June 12, 2001

Box Provisional Patent Application Assistant Commissioner for Patents Washington, District of Columbia 20231

Title:

MULTI-MODE COVERAGE FOR AN AUTONOMOUS ROBOT

Inventor:

Joseph L. Jones

Assignee:

iRobot Corporation

Filing Date:

June 12, 2001

Sir:

Please file the following enclosed Provisional Patent Application (PPA) papers listed below under 37 C.F.R. § 1.53(b)(2).

- 1. Provisional Application for Patent Cover Sheet (1 page)
- 2. Specification (22 pages)
- 3. Drawings (9 pages, informal)
- 4. Small Entity Statement (1 page)
- 5. Fee Transmittal (2 Copies)
- 6. Return Receipt Postcard Addressed to Assignee
- 7. Declaration of Mailing by "EXPRESS MAIL"

Very respectfully,

Glen D. Weinstein

Reg. No. 43,981

Express Mail Label # EK518595065US Date of Deposit: June 12, 2001



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## **FEE TRANSMITTAL** for FY 2001

Patent fees are subject to annual revision.

TOTAL AMOUNT OF PAYMENT

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Complete if Known							
Application Number							
Filing Date							
First Named Inventor							
Examiner Name							
Group Art Unit							
Attorney Docket No.	DP-5						

METHOD OF PAYMENT	FEE CALCULATION (continued)						
The Commissioner is hereby authorized to charge indicated foca and gradit any averagements to:	3. ADDITIONAL FEES						
indicated fees and credit any overpayments to:  Deposit		Large		Sma			
Account Number 501806		Entity Fee	•	Entit Fee	y Fee Description	Fee Paid	
Deposit	Code	(\$)	Cod	e (\$)	ree Description	1 00 1 010	
Account Name iRobot Corporation	105	130	205	65	Surcharge - late filing fee or oath		
Charge Any Additional Fee Required Under 37 CFR 1.16 and 1 17	127	50	227	25	Surcharge - late provisional filing fee or cover sheet		
Applicant claims small entity status	139 1	130	139	130	Non-English specification		
See 37 CFR 1.27	147 2,	520	147	2,520	For filing a request for ex parte reexamination		
2. Payment Enclosed:  Check Credit card Money Order Other	112 9	920*	112	920*	Requesting publication of SIR prior to Examiner action		
FEE CALCULATION	113 1,	840*	113	1,840*	Requesting publication of SIR after Examiner action		
1. BASIC FILING FEE	115	110	215	55	Extension for reply within first month		
Large Entity Small Entity	116 3	390	216	195	Extension for reply within second month		
Fee Fee Fee Fee Description	117 8	890	217	445	Extension for reply within third month		
Code (\$) Code (\$) Fee Paid  101 710 201 355 Utility filing fee	118 1,	,390	218	695	Extension for reply within fourth month		
106 320 206 160 Design filling fee	128 1,	890	228	945	Extension for reply within fifth month		
107 490 207 245 Plant filing fee	119 3	310	219	155	Notice of Appeal		
108 710 208 355 Reissue filling fee	120 3	310	220	155	Filing a brief in support of an appeal		
114 150 214 75 Provisional filing fee 75.00	121 2	270	221	135	Request for oral hearing		
	138 1,	510	138	1,510	Petition to institute a public use proceeding		
SUBTOTAL (1) (\$) 75.00	140	110	240	55	Petition to revive - unavoidable		
2. EXTRA CLAIM FEES Fee from	141 1,	240	241	620	Petition to revive - unintentional		
Extra Claims below Fee Paid	142 1,	240	242	620	Utility issue fee (or reissue)		
Total Claims20** = X =	143 4	440	243	220	Design issue fee		
Independent - 3** = X = =	144 6	600	244	300	Plant issue fee		
Multiple Dependent	122	130	122	130	Petitions to the Commissioner		
	123	50	123	50	Processing fee under 37 CFR 1.17(q)		
Large Entity Small Entity Fee Fee Fee Fee Description	126 1	180	126	180	Submission of Information Disclosure Stmt		
Code (\$) Code (\$) 103 18 203 9 Claims in excess of 20	581	40	581	40	Recording each patent assignment per property (times number of properties)		
102 80 202 40 Independent claims in excess of 3	146	710	246	355	Filing a submission after final rejection		
104 270 204 135 Multiple dependent claim, if not paid					(37 ČFR § 1 129(a))		
109 80 209 40 ** Reissue independent claims over original patent	149 7	710	249	355	For each additional invention to be examined (37 CFR § 1.129(b))		
110 18 210 9 ** Reissue claims in excess of 20		710	279	355	Request for Continued Examination (RCE)		
and over original patent	169				Request for expedited examination of a design application		
SUBTOTAL (2) (\$)	Other fe	ee (sp	ecify)				
**or number previously paid, if greater: For Reissues, see above	*Reduc	ed by	Basi	: Filing	Fee Paid SUBTOTAL (3) (\$)		

SUBMITTED BY						Complete (if applicable)		
Name (Print/Type)	Glen D. Weinstein	1	Registration No. (Attorney/Agent)	43,981	Telephone	617628 0055		
Signature	(M)	M			Date	6/11/01		

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#### In the United States Patent and Trademark Office

Box Provisional Patent Application Assistant Commissioner for Patents Washington, District of Columbia 20231

Title: Multi-Mode Coverage for an Autonomous Robot

Inventor: Joseph L. Jones Assignee: iRobot Corporation Filing Date: June 12, 2001

#### **DECLARATION OF MAILING BY "EXPRESS MAIL"**

Glen D. Weinstein declares as follows:

- 1. I reside at 675 Grove Street, Newton, MA 02462, and am an employee of iRobot Corporation, Twin City Office Center, Suite 6, 22 McGrath Highway, Somerville, MA 02143.
- On June 12, 2001, I deposited in the mail, "Express Mail Post Office to Addressee" service of the United States Postal Service the contents of the envelope for which "Express Mail" receipt No. EK518595065US was issued addressed to: Box Provisional Application, Assistant Commissioner for Patents, Washington, D.C., 20231.
- 3. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the above-identified application or any patents issued thereon.

Very respectfully,

Glen D. Weinstein Reg. No. 43,981

Express Mail Label # EK518595065US Date of Deposit: June 12, 2001



#### Patent Application of

#### Joseph L. Jones

for

#### MULTI-MODE COVERAGE FOR AN AUTONOMOUS ROBOT

5

This application is entitled to the benefit of United States Provisional Application Ser. No. 60/237,255 filed October 2, 2000.

#### FIELD OF THE INVENTION

10

This invention relates generally to autonomous vehicles or robots, and more specifically to methods and mobile robotic devices for covering a specific area as might be required of, or used as, robotic cleaners or lawn mowers.

#### DESCRIPTION OF PRIOR ART

15

For purposes of this description, examples will focus on the problems faced in the prior art as related to robotic cleaning (e.g., dusting, buffing, sweeping, scrubbing, dry mopping or vacuuming). The claimed invention, however, is limited only by the claims themselves, and one of skill in the art will recognize the myriad of uses for the present invention beyond indoor, domestic cleaning.

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Robotic engineers have long worked on developing an effective method of autonomous cleaning. By way of introduction, the performance of cleaning robots should concentrate on three measures of success: coverage, cleaning rate and perceived effectiveness. Coverage is the percentage of the available space visited by the robot

DOCKET A L A R M

Filed June 12, 2001

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# DOCKET

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