UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Shenzhen Silver Star Intelligent Technology Co., Ltd. Petitioner,

v.

iRobot Corporation Patent Owner

PETITION FOR INTER PARTES REVIEW OF U.S. PATENT NO. 6,809,490

Mail Stop Patent Board Patent Trial and Appeal Board P.O. Box 1450 Alexandria, VA 22313-1450



Table of Contents

					Page	
I.	MAI	NDAT	ORY 1	NOTICES UNDER 37 C.F.R. §42.8(a)(1)	1	
	A.	Real	Partie	es In Interest 37 C.F.R. §42.8(b)(1)	1	
	B.	Rela	ted Ma	atters 37 C.F.R. §42.8(b)(2)	1	
	C.	Lead	l Coun	sel and Back-Up Counsel 37 C.F.R. §42.8(b)(2)	2	
	D.	Serv	ice Inf	Formation 37 C.F.R. §42.8(b)(4)	2	
II.	PAY	'MEN'	Γ OF F	FEES UNDER 37 C.F.R. §42.103	2	
III.	SUM	1MAR	Y OF	THE '490 PATENT	3	
	A.	Desc	cription	n of the alleged invention of the '490 Patent	3	
	B.	Pros	ecution	n history of the '490 Patent	3	
IV.	REQUIREMENTS FOR INTER PARTES REVIEW UNDER 37 C.F.R. §42.104					
	A.	Grounds for standing under 37 C.F.R. §42.104(a)				
	В.		dentification of challenge under 37 C.F.R. §42.104(b) and elief requested			
		1.		ms for Which Inter Partes Review Is Requested (37 (104(b)(1)		
		2.		Specific Art and Statutory Ground(s) on Which the llenge Is Based Under 37 C.F.R. §42.104(b)(2)		
		3.	R. 9			
			a.	"means for moving the robot over a surface"	9	
			b.	"bounce mode"	10	
			c.	"isolated area"	12	



			d.	"means for manually selecting an operational mode"	15
			e.	"a control system operatively connected to said obstate detection sensor and said means for moving" and "sate control system configured to operate in a plurality of operational modes and to select from among the plur of modes in real time in response to signals generated the obstacle detection sensor."	aid ality d by
		4.		the construed claims are unpatentable (37 C.F.R. 104(b)(4))	17
		5.	Supp	oorting evidence (37 C.F.R. §42.104(b)(5))	17
V.	BRII	EF DE	SCRIP	TION OF THE PRIOR ART	17
	A.	Ueno	o (Ex. 1	1005)	17
	B.	Botte	omley	(Ex. 1006)	18
	C.	Kaw	agoe (l	Ex. 1007)	18
	D.	Öhm	nan (Ex	x. 1008)	18
	E.	Bisso	et (Ex.	1010)	19
	F.	Erwi	in (Ex.	1011)	19
	G.	Erwi	n (Ex.	1011)	19
VI.	OF A	APPLY	ING T	LANATION OF PERTINENCE AND MANNER THE CITED PRIOR ART TO EVERY CLAIM FOR V IS REQUESTED UNDER 37 C.F.R. §42.104(b)	20
	A.	Field	l of the	e art and the level of ordinary skill	20
	B.	Grou	and 1: (Claims 1, 2-5, 7, 8, and 12 is obvious over Ueno	21
		1.	Clair	n 1	21
		2.	Clair	ns 2-5, 7, 8, and 12	28
	C.			Claims 1, 2-5, 7, 8, and 12 are obvious over Ueno Article	31



	D.	Ground 3: Claims 1, 2-5, 7, 8, and 12 are obvious over Ueno and Kawagoe	31
	E.	Ground 4: Claim 12 is obvious over Ueno and Bisset	37
	F.	Ground 5: Claim 12 is obvious over Ueno, AAAI Article, and Bisset	39
	G.	Ground 6: Claim 12 is obvious over Ueno, Kawagoe, and Bisset	39
	H.	Ground 7: Claim 12 is obvious over Ueno and Erwin	40
	I.	Ground 8: Claim 12 is obvious over Ueno, AAAI Article, and Erwin	41
	J.	Ground 9: Claim 12 is obvious over Ueno, Kawagoe, and Erwin	42
	K.	Ground 10: Claim 42 is obvious over Ueno and Bottomley	42
	L.	Ground 11: Claim 42 is obvious over Ueno, AAAI Article, and Bottomley	44
	M.	Ground 12: Claim 42 is obvious over Ueno, Kawagoe, and Bottomley	44
	N.	Ground 13: Claim 42 is obvious over Ueno and Öhman	45
	O.	Ground 14: Claim 42 is obvious over Ueno, AAAI Article, and Öhman	46
	P.	Ground 15: Claim 42 is obvious over Ueno, Kawagoe, and Öhman	46
	Q.	Ground 16: Claim 42 is obvious over Ueno and Bissett-612	46
	R.	Ground 17: Claims 1 and 42 are obvious over Bottomley and AAAI Article	46
VII.	CON	CLUSION	57



List of Exhibits

Ex. No.	Description of Exhibit
1001	U.S. Patent No. 6,809,490 to Joseph L. Jones et al.
1002	Prosecution File History of U.S. Patent No. 6,809,490
1003	ITC Complaint
1004	District Court Complaints
1005	Certified translation of JP 11-212642 ("Ueno") and Affidavit certifying translation of Ueno
1006	WO 00/04430 ("Bottomley")
1007	US 6,574,536 ("Kawagoe")
1008	WO 93/03399 ("Öhman")
1009	Dictionary definition of "encounter"
1010	WO 00/38025 ("Bisset")
1011	Translation of DE 19849978 ("Erwin")
1012	US 5,204,814 ("Noonan")
1013	US 6,076,025 ("Ueno '025")
1014	JP 11-212642 ("Ueno")
1015	DE 19849978 ("Erwin")
1016	"Sensors for Mobile Robots – Theory and Application" by H.R. Everett, Wellesley, MA, 1995
1017	"Where am I? Sensors and Methods for Mobile Robot Positioning" by J. Borenstein, H.R. Everett and L. Feng, University of Michigan, Ann Arbor, MI, April 1996
1018	"Mobile Robots – Inspiration to Implementation" by J.L. Jones and A. M. Flynn, Wellesley, MA, 1 st Edition, 1993
1019	"Sweep Strategies for a Sensory-Driven, Behavior-Based Vacuum Cleaning Agent" by K.L. Doty and R.R. Harrison, AAAI Technical Report FS-93-03, AAAI 1993 Fall Symposium Series – Instantiating Real-World Agents, Oct. 1993 ("AAAI Article")
1020	Declaration of Dr. Mingshao Zhang, Ph.D., Regarding Invalidity of



DOCKET A L A R M

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.

