505331270 02/15/2019

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5378051

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
ASSAF HAREL	02/10/2019
ELI MORDECHAI	02/11/2019
TAL EFRAIM BEN DAVID	02/10/2019
AMIRAM DOTAN	02/10/2019
DAVID BARZILAI	02/10/2019
AMIR HERZBERG	02/11/2019
ITAY KHAZON	02/11/2019

RECEIVING PARTY DATA

Name:	KARAMBA SECURITY LTD	
Street Address:	24 HANAGAR STREET	
City:	HOD HASHARON	
State/Country:	ISRAEL	
Postal Code:	45277-13	

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15835451

CORRESPONDENCE DATA

Fax Number:

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

Email: virginia.simmons@finnegan.com

Correspondent Name: FINNEGAN

Address Line 1: 901 NEW YORK AVENUE, NW Address Line 4: WASHINGTON, D.C. 20001

ATTORNEY DOCKET NUMBER:	14952.0030-00000
NAME OF SUBMITTER:	VIRGINIA SIMMONS
SIGNATURE:	/Virginia Simmons/
DATE SIGNED:	02/15/2019

Total Attachments: 10

PATENT REEL: 048344 FRAME: 0038

505331270

source=Executed Assignment for Karamba Omnibus#page1.tif	
source=Executed Assignment for Karamba Omnibus#page2.tif	
source=Executed Assignment for Karamba Omnibus#page3.tif	
source=Executed Assignment for Karamba Omnibus#page4.tif	
source=Executed Assignment for Karamba Omnibus#page5.tif	
source=Executed Assignment for Karamba Omnibus#page6.tif	
source=Executed Assignment for Karamba Omnibus#page7.tif	
source=Executed Assignment for Karamba Omnibus#page8.tif	
source=Executed Assignment for Karamba Omnibus#page9.tif	
source=Executed Assignment for Karamba Omnibus#page10.tif	

ASSIGNMENT

WHEREAS I/We are the below-named inventors (hereinafter referred to as **Assignors**) of the inventions as disclosed and claimed in the applications and patents identified below this paragraph:

Application Number	Patent Number	Title	Country of Filing	Filing Date
62/752,111		Sensor Validation Status	US	10-29-2018
62/724,987		Systems and Methods for End-to-End Prevention and Protection Against Cybersecurity Threats to Vehicles	US	08-30-2018
62/694,771		Data Privacy Management System	US	07-06-2018
62/346,896		Automated Security Policy Generation for Controllers	US	06-07-2016
16/255,968		In-Place Authentication Scheme for Securing Intra-Vehicle Communication	US	01-24-2019
16/251,135		Cryptographic Key Management for End-To-End Communication Security	US	01-18-2019
16/234,714		In-Memory Protection for Controller Security	US	12-28-2018
16/205,725		Secure Controller Operation and Malware Prevention	US	11-30-2018
16/140,144		In-Place Authentication Scheme for Securing Intra-Vehicle Communication	US	09-24-2018
16/036,521		Automotive ECU Controller and Data Network Having Security Features for Protection from Malware Transmission	US	07-16-2018
16/020,323		Cryptographic Key Management for End-To-End Communication Security	US	06-27-2018
15/997,167	10,204,219	In-Memory Protection for Controller Security	US	06-04-2018
15/861,309	10,057,286	Automotive ECU Controller and Data Network Having Security Features for Protection from Malware Transmission	US	01-03-2018
15/835,451	10,009,325	End-To-End Communication Security	US	12-07-2017
15/614,187		In-Memory Protection for Controller Security	US	06-05-2017
16767024.9		Context-Based Secure Controller Operation and Malware Prevention	EP	9/7/2016

Page 1 of 4

Attorney Docket No. 14952.0033-00000

PCT/IB2017/051959	 Automated Security Policy Generation for Controllers	PCT	4/5/2017
17717868.8	 Automated Security Policy Generation for Controllers	EP	11/2/2017
PCT/IB2017/051964	 Secure Controller Operation and Malware Prevention	PCT	4/5/2017
PCT/IB2017/051965	 Reporting and Processing Controller Security Information	PCT	4/5/2017
17717869.6	 Reporting and Processing Controller Security Information	EP	11/2/2018
PCT/IB2017/051967	 Centralized Controller Management and Anomaly Detection	PCT	4/5/2017
17717870.4	 Centralized Controller Management and Anomaly Detection	EP	11/2/2018
PCT/IB2018/050047	 Automotive ECU Controller and Data Network Having Security Features for Protection from Malware Transmission	PCT	1/3/2018
PCT/IB2018/053994	 In-Memory Protection for Controller Security	PCT	6/4/2018
PCT/IB2018/055357	 End-to-End Communication Security	PCT	7/18/2018
62/319,178	 Automotive Controller Security	US	4/6/2016
62/215,065	 System and Methods for Securing an Automotive Controller	US	9/7/2015
62/735,647	 Geographically Distributed Virtual Controllers for Capturing Malware	US	9/24/2018

WHEREAS, **Karamba Security Ltd.**, a corporation of **Israel** whose post office address is **24 HaNagar Street**, **Hod Hasharon**, **Israel 45277-13** (hereinafter referred to as **Assignee**), is desirous of securing the entire right, title, and interest in and to these inventions in all countries throughout the world, and in and to all applications for patents on these inventions in all countries throughout the world, including any PCT International Application and all national stage applications based thereon that may be filed, and all patents issued upon such applications in all countries throughout the world;

NOW THEREFORE, be it known that, for good and valuable consideration the receipt of which from Assignee is hereby acknowledged, I/We, as Assignors, have sold, assigned, transferred, and set over, and do hereby sell, assign, transfer, and set over unto the Assignee, its lawful successors and assigns, my/our entire right, title, and interest in and to these inventions, the above-referenced applications and patents that disclose and claim these inventions, any PCT International Applications and all national stage applications based thereon that may be filed, any other applications for patents filed anywhere in the world that claim these inventions, and all divisions, and continuations of any such application, and all patents which may be granted thereon, and all reissues thereof, and all rights to claim priority in any country on the basis of any such applications, and all extensions, renewals, and reissues thereof; and I/We hereby authorize and request that any official of any country whose duty it is to issue patents on applications as described above, to issue all Letters Patent for these inventions to Assignee, its successors and assigns, in accordance with the terms of this Assignment;

Page 2 of 4

AND, I/WE covenant that I/We have the full right to convey the interest assigned by this Assignment, and I/We have not executed and will not execute any agreement in conflict with this Assignment;

AND, I/WE further covenant and agree that I/We will, without further consideration, communicate with Assignee, its successors and assigns, any facts known to me/us respecting these inventions, and testify in any legal proceeding, sign all lawful papers when called upon to do so, execute and deliver any and all papers that may be necessary or desirable to perfect the title to these inventions in said Assignee, its successors or assigns, execute all divisional, continuation, and reissue applications, make all rightful oaths and generally do everything possible to aid Assignee, its successors and assigns, to obtain and enforce proper patent protection for these inventions in the United States and any foreign country, it being understood that any expense incident to the execution of such papers shall be borne by the Assignee, its successors and assigns.

IN TESTIMONY WHEREOF, I/We have hereunto set our hands.

ASSIGNOR (Inventor) 1
(, ,),
7621, 1900
Signature
Assaf Harel
Print Name
February 10 th , 2019
Execution Date
ASSIGNOR (Inventor) 2
Signature
Eli Mordechai
Print Name
Execution Date
ASSIGNOR (Inventor) 3
Signature
Tal Efraim Ben David
Print Name
Execution Date
ASSIGNOR (Inventor) 4
Signature
Page 3 of 4

AND, I/WE covenant that I/We have the full right to convey the interest assigned by this Assignment, and I/We have not executed and will not execute any agreement in conflict with this Assignment;

AND, I/WE further covenant and agree that I/We will, without further consideration, communicate with Assignee, its successors and assigns, any facts known to me/us respecting these inventions, and testify in any legal proceeding, sign all lawful papers when called upon to do so, execute and deliver any and all papers that may be necessary or desirable to perfect the title to these inventions in said Assignee, its successors or assigns, execute all divisional, continuation, and reissue applications, make all rightful oaths and generally do everything possible to aid Assignee, its successors and assigns, to obtain and enforce proper patent protection for these inventions in the United States and any foreign country, it being understood that any expense incident to the execution of such papers shall be borne by the Assignee, its successors and assigns.

IN TESTIMONY WHEREOF, I/We have hereunto set our hands.

JIST NOV
Signature
Assaf Harel
Print Name
February 10 th , 2019
Execution Date
ASSIGNOR (Inventor) 2
Signature
~
Eli Mordechai Print Name
11 Feb 2019
Execution Date
ASSIGNOR (Inventor) 3
Signature
Tal Efraim Ben David
Print Name
Execution Date
ASSIGNOR (Inventor) 4
Signature
Page 3 of 4

ASSIGNOR (Inventor) 1

AND, I/WE covenant that I/We have the full right to convey the interest assigned by this Assignment, and I/We have not executed and will not execute any agreement in conflict with this Assignment;

AND, I/WE further covenant and agree that I/We will, without further consideration, communicate with Assignee, its successors and assigns, any facts known to me/us respecting these inventions, and testify in any legal proceeding, sign all lawful papers when called upon to do so, execute and deliver any and all papers that may be necessary or desirable to perfect the title to these inventions in said Assignee, its successors or assigns, execute all divisional, continuation, and reissue applications, make all rightful oaths and generally do everything possible to aid Assignee, its successors and assigns, to obtain and enforce proper patent protection for these inventions in the United States and any foreign country, it being understood that any expense incident to the execution of such papers shall be borne by the Assignee, its successors and assigns.

IN TESTIMONY WHEREOF, I/We have hereunto set our hands.

ASSIGNOR (Inventor) 1
Jess Joh
Signature
Assaf Harel
Print Name
February 10 th , 2019
Execution Date
ASSIGNOR (Inventor) 2
Signature
Eli Mordechai
Print Name
Execution Date
ASSIGNOR (Inventor) 3
<u></u>
Signature
Tal Efraim Ben David
Print Name
February 10, 2019
Execution Date
10010NOP (1 (1 -) 4
ASSIGNOR (Inventor) 4
Signature
Page 3 of 4

AND, I/WE covenant that I/We have the full right to convey the interest assigned by this Assignment, and I/We have not executed and will not execute any agreement in conflict with this Assignment;

AND, I/WE further covenant and agree that I/We will, without further consideration, communicate with Assignee, its successors and assigns, any facts known to me/us respecting these inventions, and testify in any legal proceeding, sign all lawful papers when called upon to do so, execute and deliver any and all papers that may be necessary or desirable to perfect the title to these inventions in said Assignee, its successors or assigns, execute all divisional, continuation, and reissue applications, make all rightful oaths and generally do everything possible to aid Assignee, its successors and assigns, to obtain and enforce proper patent protection for these inventions in the United States and any foreign country, it being understood that any expense incident to the execution of such papers shall be borne by the Assignee, its successors and assigns.

IN TESTIMONY WHEREOF, I/We have hereunto set our hands.

ASSIGNOR (Inventor) 1
(100)
2/62).100
Signature
Assaf Harel
Print Name
February 10 th , 2019
Execution Date
ASSIGNOR (Inventor) 2
0:
Signature
Eli Mordechai
Print Name
Execution Date
ASSIGNOR (Inventor) 3
Signature
Tal Efraim Ben David
Print Name
Execution Date
ASSIGNOR (Inventor) 4
Signature

Page 3 of 4

Amiram Dotan	_
Print Name	
February 10, 2019	_
Execution Date	
ASSIGNOR (Inventor) 5	
Signature	
David Barzilai	_
Print Name February 10, 2019	_
Execution Date	
ASSIGNOR (Inventor) 6	
Signature	-
Amir Herzberg	_
Print Name	
Execution Date	-
ASSIGNOR (Inventor) 7	
Signature	-
<u>l</u> ta y Khazon	_
Print Name	
Execution Date	-
ASSIGNEE Name:	
Signature:	
Printed Name:	
Corporate Title:	
Date:	

Page 4 of 4

Amiram Dotan		
Print Name		
Execution Date		
ASSIGNOR (Inventor)	5	
Signature		
David Barzilai		
Print Name		
Execution Date		
ASSIGNOR (Inventor) (6	
Emmone		
Signature		
Amir Herzberg		
Print Name		
Feb. 11, 2019		
Execution Date		
ASSIGNOR (Inventor)	7	
Signature		
Itay Khazon		
Print Name		
Execution Date		
ASSIGNEE Name:		
Signature:		
Printed Name:		
Corporate Title:		
Date:		

Page 4 of 4

Amiram Dotan		-
Print Name		
Execution Date		-
ASSIGNOR (Inventor)	5	
Signature		-
David Barzilai		-
Print Name		
Execution Date		-
ASSIGNOR (Inventor)	6	
		-
Signature		
Amir Herzberg		-
Print Name		
Feb. 11, 2019		-
Execution Date		
	_	
ASSIGNOR (Inventor)	7	
		-
Signature		
Itay Khazon		-
Print Name		
Feb. 11, 2019		-
Execution Date		
ASSIGNEE Name:		
Signature:		
Printed Name:		
Corporate Title:		
Date:		

Page 4 of 4

Amiram Dotan			
Print Name			
Execution Date			
ASSIGNOR (Inventor) 5			
Signature			
David Barzilai			
Print Name			
Execution Date			
ASSIGNOR (Inventor) 6			
Signature			
Amir Herzberg			
Print Name			
Execution Date			
ASSIGNOR (Inventor) 7			
Signature			
Itay Khazon			
Print Name			
Execution Date			
ASSIGNEE Name:	Karamba (Security LTD	Karamba Security Ltd. 515390979
0		X	
Signature:	Assaf Hare	1401	
Printed Name:			
Corporate Title:	Chief Scientist		
Date:	February 10th, 2019		

Page 4 of 4