

<b>PATENT ASSIGNMENT COVER SHEET</b>
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Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT5376403

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
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
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	KARAMBA SECURITY LTD
<b>Street Address:</b>	24 HANAGAR STREET
<b>City:</b>	HOD HASHARON
<b>State/Country:</b>	ISRAEL
<b>Postal Code:</b>	45277-13
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	16234714
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	
<i>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.</i>	
<b>Email:</b>	virginia.simmons@finnegan.com
<b>Correspondent Name:</b>	FINNEGAN
<b>Address Line 1:</b>	901 NEW YORK AVENUE, NW
<b>Address Line 4:</b>	WASHINGTON, D.C. 20001
<b>ATTORNEY DOCKET NUMBER:</b>	14952.0016-02000
<b>NAME OF SUBMITTER:</b>	VIRGINIA SIMMONS
<b>SIGNATURE:</b>	/Virginia Simmons/
<b>DATE SIGNED:</b>	02/14/2019
<b>Total Attachments: 10</b>	

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**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

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;

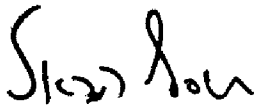
NOW THEREFORE, be it known that, for good and valuable consideration the receipt of which from Assignee is hereby acknowledged, I/We, as Assignors, have sold, assigned, transferred, and set over, and do hereby sell, assign, transfer, and set over unto the Assignee, its lawful successors and assigns, 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;

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**



\_\_\_\_\_  
Signature

\_\_\_\_\_  
Assaf Harel

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
February 10<sup>th</sup>, 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**

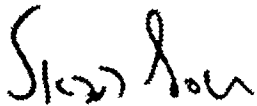
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**ASSIGNOR (Inventor) 1**



Signature

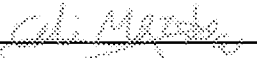
Assaf Harel

Print Name

February 10<sup>th</sup>, 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**

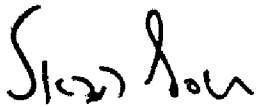
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**ASSIGNOR (Inventor) 1**



Signature

Assaf Harel

Print Name

February 10<sup>th</sup>, 2019

Execution Date

**ASSIGNOR (Inventor) 2**

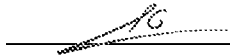
Signature

Eli Mordechai

Print Name

Execution Date

**ASSIGNOR (Inventor) 3**



Signature

Tal Efraim Ben David

Print Name

February 10, 2019

Execution Date

**ASSIGNOR (Inventor) 4**

Signature

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**ASSIGNOR (Inventor) 1**



Signature

Assaf Harel

Print Name

February 10<sup>th</sup>, 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



Amiram Dotan \_\_\_\_\_

Print Name

February 10, 2019 \_\_\_\_\_

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**ASSIGNOR (Inventor) 5**

*D. Barzilai*  
\_\_\_\_\_

Signature

David Barzilai \_\_\_\_\_

Print Name

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**ASSIGNOR (Inventor) 6**

\_\_\_\_\_  
Signature

Amir Herzberg \_\_\_\_\_

Print Name

\_\_\_\_\_  
Execution Date

**ASSIGNOR (Inventor) 7**

\_\_\_\_\_  
Signature

Itay Khazon \_\_\_\_\_

Print Name

\_\_\_\_\_  
Execution Date

**ASSIGNEE Name:** \_\_\_\_\_

Signature: \_\_\_\_\_

Printed Name: \_\_\_\_\_

Corporate Title: \_\_\_\_\_

Date: \_\_\_\_\_

Amiram Dotan  
\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Execution Date

**ASSIGNOR (Inventor) 5**

\_\_\_\_\_  
Signature  
David Barzilai  
\_\_\_\_\_  
Print Name

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Execution Date

**ASSIGNOR (Inventor) 6**

  
\_\_\_\_\_  
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: \_\_\_\_\_

Amiram Dotan

Print Name

Execution Date

**ASSIGNOR (Inventor) 5**

Signature

David Barzilai

Print Name

Execution Date

**ASSIGNOR (Inventor) 6**

*Amir Herzberg*

Signature

Amir Herzberg

Print Name

Feb. 11, 2019

Execution Date

**ASSIGNOR (Inventor) 7**

*[Signature]*

Signature

Itay Khazon

Print Name

Feb. 11, 2019

Execution Date

**ASSIGNEE Name:** \_\_\_\_\_

Signature: \_\_\_\_\_

Printed Name: \_\_\_\_\_

Corporate Title: \_\_\_\_\_

Date: \_\_\_\_\_

Amiram Dotan  
Print Name

\_\_\_\_\_  
Execution Date

**ASSIGNOR (Inventor) 5**

\_\_\_\_\_  
Signature  
David Barzilai  
Print Name

\_\_\_\_\_  
Execution Date

**ASSIGNOR (Inventor) 6**

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Signature  
Amir Herzberg  
Print Name

\_\_\_\_\_  
Execution Date

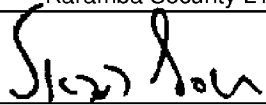
**ASSIGNOR (Inventor) 7**

\_\_\_\_\_  
Signature  
Itay Khazon  
Print Name

\_\_\_\_\_  
Execution Date

**Karamba Security Ltd.**  
**515390979**

**ASSIGNEE Name:** Karamba Security LTD

Signature: 

Printed Name: Assaf Harel

Corporate Title: Chief Scientist

Date: February 10th, 2019