508451066 03/21/2024

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 Assignment ID: PATI110430

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
Vodafone IP Licensing Limited	08/03/2023

RECEIVING PARTY DATA

Company Name:	Vodafone Global Enterprise Limited
Street Address:	Vodafone House The Connection
City:	Newbury
State/Country:	UNITED KINGDOM
Postal Code:	RG14 2FN

PROPERTY NUMBERS Total: 1

Property Type	Number		
Patent Number:	11044234		

CORRESPONDENCE DATA

Fax Number: 8013281707

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.

Phone: 8015339800 Email: dso@wnlaw.com **Correspondent Name:** Shane K. Jensen

Address Line 1: 60 E. SOUTH TEMPLE, SUITE 1000 Address Line 4: SALT LAKE CITY, UTAH 84111

ATTORNEY DOCKET NUMBER:	17260-US11044234
NAME OF SUBMITTER:	Dee So
SIGNATURE:	Dee So
DATE SIGNED:	03/21/2024

Total Attachments: 14

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> **PATENT** REEL: 066853 FRAME: 0042

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CONFIRMATORY ASSIGNMENT: FOR THE PURPOSES OF RECORDING THE ASSIGNMENT OF PATENTS/PATENT APPLICATIONS ASSIGNED IN AN ASSIGNMENT

AGREEMENT OF 23 JUNE 2023

BETWEEN

VODAFONE IP LICENSING LIMITED ("the Assignor"), a company registered in England and Wales and having its registered office at Vodafone House, The Connection, Newbury, Berkshire, RG14 2FN, UK,

VODAFONE GROUP SERVICES LIMITED ("the Assignor"), a company registered in England and Wales and having its registered office at Vodafone House, The Connection, Newbury, Berkshire, RG14 2FN, UK

and

VODAFONE GLOBAL ENTERPRISE LIMITED ("the Assignee"), a company registered in England and Wales and having its registered office at Vodafone House, The Connection, Newbury, Berkshire, RG14 2FN, UK

WHEREAS:

- (A) The Assignor filed or acquired the patents and patent applications ("the Patents") listed in the schedule hereto for inventions ("the Inventions", which term includes any and all inventions disclosed in the Patents):-
- (B) The Assignor and Assignee entered into an agreement dated the 23rd day of June 2023 (herein after called "the Agreement") for the transfer from the Assignor to the Assignee of all rights, title and interest in and to the Patents including the right to claim priority.
- (C) The parties agreed on the assignment hereinafter set forth.

C2 General

IN ACCORDANCE WITH TERMS OF THE AGREEMENT, IT IS HEREBY AGREED BY AND BETWEEN THE PARTIES AS FOLLOWS:

- 1. For consideration of the sum of £1 or other good and valuable consideration, receipt of which the Assignor hereby acknowledges, the Assignor hereby confirms the assignment to the Assignee with full title guarantee all rights, title and interest in and to the Patents and Inventions together with all renewals, extensions, continuations, or divisional applications deriving therefrom, together with all rights of action arising therefrom including the right to sue for damages and other remedies in respect of any previous infringements thereof or any acts prior to the date hereof, together with the right to apply for, prosecute and obtain patent protection throughout the world in respect of the inventions claimed in or which form part of the assigned Patents and Inventions including the right to claim priority therefrom.
- 2. The Assignor hereby agrees that it will at all times hereafter itself do all such acts and execute all such documents as may reasonably be necessary or desirable to give effect to this assignment.

COUNTERPARTS:

This confirmatory assignment may be executed in any number of counterparts, each of which when executed shall constitute a duplicate original, but all the counterparts shall together constitute the one confirmatory assignment.

C2 General **PATENT**

REEL: 066853 FRAME: 0045

bove written.
SIGNED by the said VODAFONE IP LICENSING LIMITED)
(print name and position) WAYNE SPILLET
PIRCOR - WORKE INTOLLEMAN
PRICE - WONGE INTELLEMENT PROPERTY LICENSING MINITED
IGNED by the said VODAFONE GROUP SERVICES LIMITED)
Rt Smard
(print name and position)
Rebecca Symondson Director
DIRE CTOR
IGNED by the said VODAFONE GLOBAL ENTERPRISE LIMITED)
(print name and position)

IN WITNESS WHEREOF this Assignment has been executed on the year and day first

SCHEDULE

The patents and patent application(s) which will be jointly owned by DABCo and Vodafone:

	Example Publ No:	Voit :	(Computes, 1/2) Explication	Volutionicalities
P101265	GB2518975	2014	UK	Secure Device Management
P101292	EP3044928	2014	France, Germany, UK, USA, EP Div.*	Communicating with a M2M Device
P110011	EP3044975	2014	France, Germany, UK, USA, EP Div.*	Perfect Forward Secrecy
P110023	<u>US10313308</u>	2014	UK, USA, USA Cont.	Secure Communication Routing
P110082	EP3098745	2016	France, Germany, UK, Spain, Greece, Italy, USA, EP Div.*	Device Specific Encryption
P110083	EP3099094	2016	France, Germany, UK, USA, EP Div.*	Setting CPE Password
P110090	<u>US10484869</u>	2015	China *, USA	Simplified GBA using Ub Interface
P101299	EP3044983	2014	UK, Germany, France	Secure Communication Channels
P101342	EP3044984	2014	UK, Germany, France, Greece, Italy	Security Keys - Lifetime linkage
P110319	GB2609242	2021	UK*, PCT*	Secure Wake-up Messaging
P110389	(To be filed)	2023	(To be determined)	Secure Device Wake-up – Merging the GBA Push Mechanism with the TLS-PSK Protocol

PATENT REEL: 066853 FRAME: 0047

? General

Details of the SIM Trust patent families to be jointly owned by DABCo and Vodafone:

Family Ref.	Publication no.	Application no.	Date filed	Date granted	Official Title
P101265-GB	GB2518975	GB 1415918.0	2014-09-	2020-12-	Communicating with a
			09	30	Device
P101292-DE	EP3044928(DE)	EP 14777370.9	2014-09-	2020-11-	Communicating with a
	DE60201407203		12	04	Machine-to-Machine
	2.3				Device
P101292-FR	EP3044928(FR)	EP 14777370.9	2014-09-	2020-11-	Communicating with a
			12	04	Machine-to-Machine
					Device
P101292-GB	EP3044928(GB)	EP 14777370.9	2014-09-	2020-11-	Communicating with a
			12	04	Machine-to-Machine
					Device
P101292-US	US10673820	US 15/021871	2014-09-	2020-06-	Communicating with a
			12	02	Machine-to-Machine
					Device
P101292-EP-	EP3767984	EP 20195438.5	2014-09-	(Pending)	Communicating with a
DIV			12		Machine-to-Machine
					Device
P110011-DE	EP3044975(DE)	EP 14777373.3	2014-09-	2021-05-	Secure Communication
	DE60201407773		12	26	with a Mobile Device
	6				
P110011-FR	EP3044975(FR)	EP 14777373.3	2014-09-	2021-05-	Secure Communication
			12	26	with a Mobile Device
P110011-US	US10305862	US 15/021912	2014-09-	2019-05-	Secure Communication
			12	28	with a Mobile Device
P110011-EP-	EP3832982	EP 21154414.3	2014-09-	(Pending)	Secure Communication
DIV			12		with a Mobile Device
P110011-GB	GB2518976	GB 1415927.1	2014-09-	2022-11-	Secure Communication
			09	04	with a Mobile Device
P110023-US	US10313308	US 15/021913	2014-09-	2019-06-	Communicating with a
			12	04	Device
P110023-US-	US11044234	US 16/357727	2019-03-	2021-06-	Communicating with a
CNT			09	22	Device
P110023-GB	GB2518301	GB 1415921.4	2014-09-	2020-07-	Identifying a server
			09	15	instance in
					communications with a
	***************************************				bootstrapping server
P110082-DE	EP3098745(DE)	EP 16171815.0	2016-05-	2021-07-	Device Key Security
	DE60201606083		27	21	
	6				

P110082-ES	EP3098745(ES) ES2893655	EP 16171815.0	2016-05-	2021-07-	Device Key Security
P110082-FR	EP3098745(FR)	EP 16171815.0	2016-05-	2021-07-	Device Key Security
P110082-GB(EP3098745(GB)	EP 16171815.0	2016-05-	2021-07-	Device Key Security
P110082-GR	EP3098745(GR)	EP 16171815.0	2016-05-	2021-07-	Device Key Security
P110082-IT	EP3098745(IT)	EP 16171815.0	2016-05- 27	2021-07- 21	Device Key Security
P110082-US	US10680814	US 15/168384	2016-05-	2020-06-	Device Key Security
P110082-EP- DIV	EP3876124	EP 21171663.4	2016-05- 27	(Pending)	Device Key Security
P110083-US	US10298397	US 15/168373	2016-05-	2019-05- 21	Setting a Password on a Device
P110083-EP- DIV	EP3726871	EP 20178580.5	2016-05-	(Pending)	Setting a Password on a Device
P110083-GB(EP3099094(GB)	EP 16171814.3	2016-05-	2020-07-	Setting a Password on a Device
P110083-FR	EP3099094(FR)	EP 16171814.3	2016-05-	2020-07- 08	Setting a Password on a Device
P110083-DE	EP3099094(DE) DE60201603939 6	EP 16171814.3	2016-05- 27	2020-07- 08	Setting a Password on a Device
P110090-US	US10484869	US 15/208149	2016-07-	2019-11- 19	Generic Bootstrapping Architecture Protocol
P110090-CN	CN106714154	CN 201610806417.6	2016-07-	25-11-20 22	Generic Bootstrapping Architecture Protocol
P101299-GB- NP	GB2518254	GB 1409641.6	30-05-20 14	17-11-20 20	Communicating with a Machine to machine Device
P101299-GB- DIV	GB2586549	GB 2016853.0	30-05-20 14	27-04-20 21	Communicating with a Machine to machine Device
P101299-GB	EP3044983	EP 14776681.0	12-09-20 14	19-05-20 21	Communicating with a Machine to machine Device
P101299-DE	EP3044983	EP 14776681.0	12-09-20 14	19-05-20 21	Communicating with a Machine to machine Device
P101299-FR	EP3044983	EP 14776681.0	12-09-20	19-05-20 21	Communicating with a Machine to machine Device

P101299-US	US10439991	US 15/021,873	14-03-20	18-09-20	Communicating with a
			16	19	Machine to machine
					Device
P101342-GB	GB2518522	GB 1414999.1	22-08-20	23-06-20	Communicating with a
			14	20	machine to machine
					device
P101342-GB(EP3044984	EP 14776683.6	12-09-20	21-07-20	Communicating with a
1)			14	21	Machine to machine
					Device
P101342-DE	EP3044984	EP 14776683.6	12-09-20	21-07-20	Communicating with a
			14	21	Machine to machine
					Device
P101342-FR	EP3044984	EP 14776683.6	12-09-20	21-07-20	Communicating with a
			14	21	Machine to machine
					Device
P101342-GR	EP3044984	EP 14776683.6	12-09-20	21-07-20	Communicating with a
			14	21	Machine to machine
					Device
P101342-IT	EP3044984	EP 14776683.6	12-09-20	21-07-20	Communicating with a
			14	21	Machine to machine
					Device
P101342-US	US10313307	US 15/021,879	14-03-20	15-05-20	Communicating with a
			16	19	Machine to machine
					Device
P110319-WO	WO2023/007135	PCT/GB2022/0519	25-07-20	n/a	Waking Up a Device
		40	22		_
P110319-GB	GB2609242	GB 2110715.6	26-07-20	n/a	Waking Up a Device
			21		
P110389	(To be filed)	n/a	n/a	n/a	Secure Device Wake-up
					- Merging the GBA Push
					Mechanism with the
					TLS-PSK Protocol

CONFIRMATORY ASSIGNMENT: FOR THE PURPOSES OF RECORDING THE ASSIGNMENT OF PATENTS/PATENT APPLICATIONS ASSIGNED IN AN ASSIGNMENT AGREEMENT OF 23 JUNE 2023

BETWEEN

VODAFONE IP LICENSING LIMITED ("the Assignor"), a company registered in England and Wales and having its registered office at Vodafone House, The Connection, Newbury, Berkshire, RG14 2FN, UK,

VODAFONE GROUP SERVICES LIMITED ("the Assignor"), a company registered in England and Wales and having its registered office at Vodafone House, The Connection, Newbury, Berkshire, RG14 2FN, UK

and

VODAFONE GLOBAL ENTERPRISE LIMITED ("the Assignee"), a company registered in England and Wales and having its registered office at Vodafone House, The Connection, Newbury, Berkshire, RG14 2FN, UK

WHEREAS:

- (A) The Assignor filed or acquired the patents and patent applications ("the Patents") listed in the schedule hereto for inventions ("the Inventions", which term includes any and all inventions disclosed in the Patents):-
- (B) The Assignor and Assignee entered into an agreement dated the 23rd day of June 2023 (herein after called "the Agreement") for the transfer from the Assignor to the Assignee of all rights, title and interest in and to the Patents including the right to claim priority.
- (C) The parties agreed on the assignment hereinafter set forth.

PATENT REEL: 066853 FRAME: 0051

C2 General

IN ACCORDANCE WITH TERMS OF THE AGREEMENT, IT IS HEREBY AGREED BY AND BETWEEN THE PARTIES AS FOLLOWS:

- 1. For consideration of the sum of £1 or other good and valuable consideration, receipt of which the Assignor hereby acknowledges, the Assignor hereby confirms the assignment to the Assignee with full title guarantee all rights, title and interest in and to the Patents and Inventions together with all renewals, extensions, continuations, or divisional applications deriving therefrom, together with all rights of action arising therefrom including the right to sue for damages and other remedies in respect of any previous infringements thereof or any acts prior to the date hereof, together with the right to apply for, prosecute and obtain patent protection throughout the world in respect of the inventions claimed in or which form part of the assigned Patents and Inventions including the right to claim priority therefrom.
- 2. The Assignor hereby agrees that it will at all times hereafter itself do all such acts and execute all such documents as may reasonably be necessary or desirable to give effect to this assignment.

COUNTERPARTS:

This confirmatory assignment may be executed in any number of counterparts, each of which when executed shall constitute a duplicate original, but all the counterparts shall together constitute the one confirmatory assignment.

IN WITNESS WHEREOF th above written.	is Assignment has been executed on the year and day first
SIGNED by the said VODAF	FONE IP LICENSING LIMITED)
	(print name and position)
SIGNED by the said VODAF	FONE GROUP SERVICES LIMITED)
	(print name and position)
SIGNED by the said VODAF	FONE GLOBAL ENTERPRISE LIMITED) And
	FONE GLOBAL ENTERPRISE LIMITED) And Aportions (print name and position)

SCHEDULE

The patents and patent application(s) which will be jointly owned by DABCo and

The pate Vodafon		nt applica	tion(s) which will be	jointly owned by DABCo and
Acoustos.		Yasını İdleri	(Chanding	Accustoficating 2.4
P101265	GB2518975	2014	UK	Secure Device Management
P101292	EP3044928	2014	France, Germany, UK, USA, EP Div.*	Communicating with a M2M Device
P110011	EP3044975	2014	France, Germany, UK, USA, EP Div.*	Perfect Forward Secrecy
P110023	<u>US10313308</u>	2014	UK, USA, USA Cont.	Secure Communication Routing
P110082	EP3098745	2016	France, Germany, UK, Spain, Greece, Italy, USA, EP Div.*	Device Specific Encryption
P110083	EP3099094	2016	France, Germany, UK, USA, EP Div.*	Setting CPE Password
P110090	<u>US10484869</u>	2015	China *, USA	Simplified GBA using Ub Interface
P101299	EP3044983	2014	UK, Germany, France	Secure Communication Channels
P101342	EP3044984	2014	UK, Germany, France, Greece, Italy	Security Keys - Lifetime linkage
P110319	GB2609242	2021	UK*, PCT*	Secure Wake-up Messaging
P110389	(To be filed)	2023	(To be determined)	Secure Device Wake-up – Merging the GBA Push Mechanism with the TLS-PSK Protocol

Details of the SIM Trust patent families to be jointly owned by DABCo and Vodafone:

Family Ref.	Publication no.	Application no.	Date filed	Date granted	Official Title
P101265-GB	GB2518975	GB 1415918.0	2014-09-	2020-12-	Communicating with a
			09	30	Device
P101292-DE	EP3044928(DE)	EP 14777370.9	2014-09-	2020-11-	Communicating with a
	DE60201407203		12	04	Machine-to-Machine
	2.3				Device
P101292-FR	EP3044928(FR)	EP 14777370.9	2014-09-	2020-11-	Communicating with a
			12	04	Machine-to-Machine
					Device
P101292-GB	EP3044928(GB)	EP 14777370.9	2014-09-	2020-11-	Communicating with a
			12	04	Machine-to-Machine
					Device
P101292-US	US10673820	US 15/021871	2014-09-	2020-06-	Communicating with a
			12	02	Machine-to-Machine
					Device
P101292-EP-	EP3767984	EP 20195438.5	2014-09-	(Pending)	Communicating with a
DIV			12		Machine-to-Machine
					Device
P110011-DE	EP3044975(DE)	EP 14777373.3	2014-09-	2021-05-	Secure Communication
	DE60201407773		12	26	with a Mobile Device
	6		<u>- </u>		
P110011-FR	EP3044975(FR)	EP 14777373.3	2014-09-	2021-05-	Secure Communication
			12	26	with a Mobile Device
P110011-US	US10305862	US 15/021912	2014-09-	2019-05-	Secure Communication
Annual Control of the	-	***************************************	12	28	with a Mobile Device
P110011-EP-	EP3832982	EP 21154414.3	2014-09-	(Pending)	Secure Communication
DIV			12		with a Mobile Device
P110011-GB	GB2518976	GB 1415927.1	2014-09-	2022-11-	Secure Communication
 			09	04	with a Mobile Device
P110023-US	US10313308	US 15/021913	2014-09-	2019-06-	Communicating with a
w			12	04	Device
P110023-US-	US11044234	US 16/357727	2019-03-	2021-06-	Communicating with a
CNT			09	22	Device
P110023-GB	GB2518301	GB 1415921.4	2014-09-	2020-07-	Identifying a server
			09	15	instance in
					communications with a
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~					bootstrapping server
P110082-DE	EP3098745(DE)	EP 16171815.0	2016-05-	2021-07-	Device Key Security
	DE60201606083		27	21	
	6				

P110082-ES	EP3098745(ES) ES2893655	EP 16171815.0	2016-05-	2021-07-	Device Key Security
P110082-FR	EP3098745(FR)	EP 16171815.0	2016-05- 27	2021-07- 21	Device Key Security
P110082-GB(	EP3098745(GB)	EP 16171815.0	2016-05-	2021-07-	Device Key Security
P110082-GR	EP3098745(GR)	EP 16171815.0	2016-05-	2021-07-	Device Key Security
P110082-IT	EP3098745(IT)	EP 16171815.0	2016-05-	2021-07- 21	Device Key Security
P110082-US	US10680814	US 15/168384	2016-05-	2020-06- 09	Device Key Security
P110082-EP- DIV	EP3876124	EP 21171663.4	2016-05- 27	(Pending)	Device Key Security
P110083-US	US10298397	US 15/168373	2016-05-	2019-05- 21	Setting a Password on a Device
P110083-EP- DIV	EP3726871	EP 20178580.5	2016-05- 27	(Pending)	Setting a Password on a Device
P110083-GB(	EP3099094(GB)	EP 16171814.3	2016-05- 27	2020-07- 08	Setting a Password on a Device
P110083-FR	EP3099094(FR)	EP 16171814.3	2016-05	2020-07- 08	Setting a Password on a Device
P110083-DE	EP3099094(DE) DE60201603939 6	EP 16171814.3	2016-05- 27	2020-07- 08	Setting a Password on a Device
P110090-US	US10484869	US 15/208149	2016-07-	2019-11- 19	Generic Bootstrapping Architecture Protocol
P110090-CN	CN106714154	CN 201610806417.6	2016-07-	25-11-20 22	Generic Bootstrapping Architecture Protocol
P101299-GB- NP	GB2518254	GB 1409641.6	30-05-20 14	17-11-20 20	Communicating with a Machine to machine Device
P101299-GB- DIV	GB2586549	GB 2016853.0	30-05-20 14	27-04-20 21	Communicating with a Machine to machine Device
P101299-GB	EP3044983	EP 14776681.0	12-09-20 14	19-05-20 21	Communicating with a Machine to machine Device
P101299-DE	EP3044983	EP 14776681.0	12-09-20 14	19-05-20 21	Communicating with a Machine to machine Device
P101299-FR	EP3044983	EP 14776681.0	12-09-20 14	19-05-20 21	Communicating with a Machine to machine Device

P101299-US	US10439991	US 15/021,873	14-03-20	18-09-20	Communicating with a
			16	19	Machine to machine
					Device
P101342-GB	GB2518522	GB 1414999.1	22-08-20	23-06-20	Communicating with a
			14	20	machine to machine
					device
P101342-GB(	EP3044984	EP 14776683.6	12-09-20	21-07-20	Communicating with a
1)			14	21	Machine to machine
					Device
P101342-DE	EP3044984	EP 14776683.6	12-09-20	21-07-20	Communicating with a
			14	21	Machine to machine
					Device
P101342-FR	EP3044984	EP 14776683.6	12-09-20	21-07-20	Communicating with a
			14	21	Machine to machine
					Device
P101342-GR	EP3044984	EP 14776683.6	12-09-20	21-07-20	Communicating with a
			14	21	Machine to machine
					Device
P101342-IT	EP3044984	EP 14776683.6	12-09-20	21-07-20	Communicating with a
			14	21	Machine to machine
					Device
P101342-US	US10313307	US 15/021,879	14-03-20	15-05-20	Communicating with a
			16	19	Machine to machine
					Device
P110319-WO	WO2023/007135	PCT/GB2022/0519	25-07-20	n/a	Waking Up a Device
		40	22		
P110319-GB	GB2609242	GB 2110715.6	26-07-20	n/a	Waking Up a Device
			21		
P110389	(To be filed)	n/a	n/a	n/a	Secure Device Wake-up
					- Merging the GBA Push
					Mechanism with the
					TLS-PSK Protocol