

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT	
NATURE OF CONVEYANCE:	ASSIGNMENT	
CONVEYING PARTY DATA		
	Name	Execution Date
	NOKIA SHANGHAI BELL CO., LTD.	07/24/2023
RECEIVING PARTY DATA		
Name:	RFS TECHNOLOGIES, INC.	
Street Address:	200 POND VIEW DRIVE	
City:	MERIDEN	
State/Country:	CONNECTICUT	
Postal Code:	06450	
PROPERTY NUMBERS Total: 28		
Property Type	Number	
Application Number:	16957602	
Application Number:	16582562	
Application Number:	16789732	
Application Number:	17611414	
Application Number:	16446216	
Application Number:	16515542	
Application Number:	16588142	
Application Number:	16751355	
Application Number:	17500027	
Application Number:	15102943	
Application Number:	15108941	
Application Number:	15108840	
Application Number:	15541539	
Application Number:	15782407	
Application Number:	15569956	
Application Number:	15775613	
Application Number:	16060545	
Application Number:	16306632	
Application Number:	16495954	
Application Number:	16320609	

PATENT

Property Type	Number
Application Number:	15393884
Application Number:	16343659
Application Number:	16648003
Application Number:	15395023
Application Number:	15442944
Application Number:	16652446
Application Number:	16652454
Application Number:	16758762

CORRESPONDENCE DATA

Fax Number: (617)646-8646

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: 6176468000

Email: macaulay.rush@wolfgreenfield.com

Correspondent Name: WOLF, GREENFIELD & SACKS, P.C.

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Address Line 4: BOSTON, MASSACHUSETTS 02210

ATTORNEY DOCKET NUMBER: A1402.90001US00

NAME OF SUBMITTER: MACAULAY RUSH

SIGNATURE: /MacAulay Rush/

DATE SIGNED: 08/22/2023

Total Attachments: 12

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PATENT ASSIGNMENT

THIS Assignment is effective as of 29 May, 2023 between

NOKIA SHANGHAI BELL CO., LTD. (formerly known as ALCATEL-LUCENT SHANGHAI BELL CO., LTD), a corporation organized under the laws of the People's Republic of China (hereinafter "Assignor") and

RFS TECHNOLOGIES, INC. (formerly known as RADIO FREQUENCY SYSTEMS, INC.), a corporation organized under the laws of the State of Delaware in the United States of America (hereinafter "Assignee")

WHEREAS, Assignor is the owner of certain patents and patent applications, as more particularly described in Attachment 1 hereto (hereinafter the "Patents"), incorporated herein by reference;

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged:

Assignor sells, assigns, transfers and conveys to Assignee, and its successors and assigns, all right, title, and interest in and to each of the Patents listed in Attachment 1 hereto.

Assignor hereby authorizes and requests the officials of the European Patent Office, the World Intellectual Property Organization, and any corresponding entities or agencies in any applicable jurisdiction, to record Assignee as assignee and owner of the entire right, title and interest in, to and under the Patents.

IN WITNESS WHEREOF, the parties have caused this instrument to be signed by their duly authorized officers as of the day and year written below.

NOKIA SHANGHAI BELL CO., LTD.

By: [Signature]
Name: MARKUS BORCHERT
Title: CEO NSB President
Date: 24 JUL 2023

Name:
Title:
Date:

RFS TECHNOLOGIES, INC.

By: [Signature]
Name: STEPHEN JEROMA
Title: GENERAL MANAGER
Date: 26 JUNE 2023

Name:
Title:
Date:

ATTACHMENT 1

Internal Case Reference	Country	Priority Date	Filing Date	Application Number	Publication Number	Grant Date	Patent Number	Registered owner
820781-CN-UM	China	9.11.2017	9.11.2017	201721487472.X		18.3.2018	ZL201721487472.X	Nokia Shanghai Bell Co., Ltd.
820781-CN-NP	China	9.11.2017	9.11.2017	201711098031.5	109768173			Nokia Shanghai Bell Co., Ltd.
820781-US-PCT	United States of America	9.11.2017	2.11.2018	16/758762	20210184352			Nokia Shanghai Bell Co., Ltd.
820781-EP-EPT	European Procedure (Patents)	9.11.2017	2.11.2018	18875825.4	3707776			Nokia Shanghai Bell Co., Ltd.
820691-US-PCT	United States of America	2.10.2017	27.9.2018	16/652454	20200235482	29.10.2022	US11482796	Nokia Shanghai Bell Co., Ltd.
820691-DE-EPA	Germany	2.10.2017	2.10.2017	17306316.5	3462536	30.6.2021	602017041161.2	Nokia Shanghai Bell Co., Ltd.
820691-FR-EPA	France	2.10.2017	2.10.2017	17306316.5	3462536	30.6.2021	3462536	Nokia Shanghai Bell Co., Ltd.
820691-GB-EPA	United Kingdom	2.10.2017	2.10.2017	17306316.5	3462536	30.6.2021	3462536	Nokia Shanghai Bell Co., Ltd.
820685-US-PCT	United States of America	2.10.2017	2.10.2018	16/852448	20200235479	22.2.2022	US11258178	Nokia Shanghai Bell Co., Ltd.
820685-DE-EPA	Germany	2.10.2017	2.10.2017	17306315.7	3462542	19.5.2021	602017038774.6	Nokia Shanghai Bell Co., Ltd.
820478-EP-EPA	European Procedure (Patents)	21.9.2017	21.9.2017	17192469.9	3460905	9.2.2022	3460905	Nokia Shanghai Bell Co., Ltd.
820478-DE-EPA	Germany	21.9.2017	21.9.2017	17192469.9	3460905	9.2.2022	602017033100.6	Nokia Shanghai Bell Co., Ltd.
820478-IT-EPA	Italy	21.9.2017	21.9.2017	17192469.9	3460905	9.2.2022	502022000029753	Nokia Shanghai Bell Co., Ltd.
820478-FR-EPA	France	21.9.2017	21.9.2017	17192469.9	3460905	9.2.2022	3460905	Nokia Shanghai Bell Co., Ltd.

826478-CN-EPA	United Kingdom	21.9.2017	21.9.2017	17192469.9	3460905	9.2.2022	3460905	Nokia Shanghai Bell Co., Ltd.
826013-CN-UM	China	29.12.2016	29.12.2016	201621466724.6		8.12.2017	ZL201621466724.6	Nokia Shanghai Bell Co., Ltd.
826013-CN-NP	China	29.12.2016	29.12.2016	201631246851.X	103260276			Nokia Shanghai Bell Co., Ltd.
819912-US-NP	United States of America	30.12.2016	30.12.2016	15095023	US20180191046	8.1.2019	US10177431	Nokia Shanghai Bell Co., Ltd.
819901-US-PCT	United States of America	20.9.2017	20.9.2018	157648703	20200266540			Nokia Shanghai Bell Co., Ltd.
819901-CN-PCT	China	20.9.2017	20.9.2018	201880075055.5	111373602	26.8.2022	ZL201880075055.5	Nokia Shanghai Bell Co., Ltd.
819817-CN-UM	China	21.10.2016	21.10.2016	201621146840.X		5.4.2017	ZL201621146840.X	Nokia Shanghai Bell Co., Ltd.
819817-CN-NP	China	21.10.2016	21.10.2016	201610920764.1	CN107978343A	7.1.2022	ZL201610920764.1	Nokia Shanghai Bell Co., Ltd.
819817-EP-EPT	European Procedure (Patent)	21.10.2016	20.10.2017	17862058.1	3531504			Nokia Shanghai Bell Co., Ltd.
819817-VN-PCT	Vietnam	21.10.2016	20.10.2017	1-2019-02637				Nokia Shanghai Bell Co., Ltd.
819817-BR-PCT	Brazil	21.10.2016	20.10.2017	1120190080260	112019008026-0			Nokia Shanghai Bell Co., Ltd.
819817-US-PCT	United States of America	21.10.2016	20.10.2017	16343659	20190280388	23.3.2021	US10957983	Nokia Shanghai Bell Co., Ltd.
819519-CN-UM	China	30.8.2016	30.8.2016	201621015733.3		22.2.2017	ZL201621015733.3	Nokia Shanghai Bell Co., Ltd.
819519-CN-NP	China	30.8.2016	30.8.2016	201610772362.1	CN107799872A			Nokia Shanghai Bell Co., Ltd.
819103-US-NP	United States of America	25.7.2016	29.12.2016	157393884	20180026380	21.1.2020	US10541477	Nokia Shanghai Bell Co., Ltd.
819103-US-PCT	United States of America	25.7.2016	25.7.2017	16320609	20190165487	17.8.2021	US11095044	Nokia Shanghai Bell Co., Ltd.

819103-IN-PCT	India	25.7.2016	25.7.2017	201917603204	21/2019			Nokia Shanghai Bell Co., Ltd.
819103-CN-PCT	China	25.7.2016	25.7.2017	201786658766.5	169937312	17.9.2021	ZL201780058766.5	Nokia Shanghai Bell Co., Ltd.
819103-DE-EPT	Germany	25.7.2016	25.7.2017	17749020.8	3488496	5.5.2021	602017038116.0	Nokia Shanghai Bell Co., Ltd.
819103-FR-EPT	France	25.7.2016	25.7.2017	17749020.8	3488496	5.5.2021	3488496	Nokia Shanghai Bell Co., Ltd.
819103-GB-EPT	United Kingdom	25.7.2016	25.7.2017	17749020.8	3488496	5.5.2021	3488496	Nokia Shanghai Bell Co., Ltd.
818985-CN-UM	China	31.3.2016	31.3.2016	201620267222.4		28.9.2016	ZL201620267222.4	Nokia Shanghai Bell Co., Ltd.
818985-CN-NP	China	31.3.2016	31.3.2016	201610199978.4	CN107293837A			Nokia Shanghai Bell Co., Ltd.
818814-CN-UM	China	15.4.2016	15.4.2016	201620319817.X		23.11.2016	ZL201620319817.X	Nokia Shanghai Bell Co., Ltd.
818814-CN-NP	China	15.4.2016	15.4.2016	201610237785.3	CN107302137A			Nokia Shanghai Bell Co., Ltd.
818782-EP-EPA	European Procedure (Patents)	3.6.2016	3.6.2016	16305649.2	EP3252865			Nokia Shanghai Bell Co., Ltd.
818752-US-PCT	United States of America	3.6.2016	15.5.2017	16/306632	20190221910	15.6.2021	11038248	Nokia Shanghai Bell Co., Ltd.
818752-KR-PCT	South Korea / Republic of Korea	3.6.2016	15.5.2017	2019-7006180	2019-0013489	6.7.2021	10-3276258	Nokia Shanghai Bell Co., Ltd.
818752-CN-PCT	China	3.6.2016	15.5.2017	201780037481.5	109314292	25.2.2022	ZL201780037481.5	Nokia Shanghai Bell Co., Ltd.
818751-DE-EPA	Germany	24.5.2016	24.5.2016	16305603.9	3249741	26.2.2020	602016030491.0	Nokia Shanghai Bell Co., Ltd.
818751-FR-EPA	France	24.5.2016	24.5.2016	16305603.9	3249741	26.2.2020	3249741	Nokia Shanghai Bell Co., Ltd.
818717-CN-UM	China	30.6.2016	30.6.2016	201620684364.0		4.1.2017	ZL201620684364.0	Nokia Shanghai Bell Co., Ltd.
818717-CN-NP	China	30.6.2016	30.6.2016	201610506788.2	CN107565208A			Nokia Shanghai Bell Co., Ltd.

818336-CN-UM	China	17.8.2016	17.8.2016	201620894519.3		15.2.2017	ZL201620894519.3	Nokia Shanghai Bell Co., Ltd.
818336-CN-NP	China	17.8.2016	17.8.2016	201610682965.8	CN107768792A			Nokia Shanghai Bell Co., Ltd.
818335-CN-UM	China	23.5.2016	23.5.2016	201620473194.5		14.12.2016	ZL201620473194.5	Nokia Shanghai Bell Co., Ltd.
818335-CN-NP	China	23.5.2016	23.5.2016	201610345762.4	CN107425253A			Nokia Shanghai Bell Co., Ltd.
818462-CN-UM	China	19.8.2016	19.8.2016	201620909936.0		25.1.2017	ZL201620909936.0	Nokia Shanghai Bell Co., Ltd.
818462-CN-NP	China	19.8.2016	19.8.2016	201610695166.9	CN107768798A			Nokia Shanghai Bell Co., Ltd.
818385-CN-UM	China	10.12.2015	10.12.2015	201521028031.4		7.9.2016	ZL201521028031.4	Nokia Shanghai Bell Co., Ltd.
818385-CN-NP	China	10.12.2015	10.12.2015	201510919997.5	CN106876885A			Nokia Shanghai Bell Co., Ltd.
818385-US-PCT	United States of America	10.12.2015	2.12.2016	16/060545	20180358692			Nokia Shanghai Bell Co., Ltd.
818385-JP-PCT	Japan	10.12.2015	2.12.2016	2018-539528	2019-566630	30.3.2022	7049994	Nokia Shanghai Bell Co., Ltd.
818385-EP-EPT	European Procedure (Patents)	10.12.2015	2.12.2016	16872355.9	3389138			Nokia Shanghai Bell Co., Ltd.
818385-KR-PCT	South Korea / Republic of Korea	10.12.2015	7.10.2020	10-2020-7028821	2020-0118253	30.6.2022	10-2412429	Nokia Shanghai Bell Co., Ltd.
818326-US-PCT	United States of America	13.11.2015	4.11.2016	15/775613	20180442786	15.9.2020	US10777874	Nokia Shanghai Bell Co., Ltd.
818326-KR-PCT	South Korea / Republic of Korea	13.11.2015	4.11.2016	20187016839	2018-0097545	17.4.2020	10-2104187	Nokia Shanghai Bell Co., Ltd.
818326-JP-PCT	Japan	13.11.2015	4.11.2016	2018-544388	2018-533898	27.12.2019	6038079	Nokia Shanghai Bell Co., Ltd.
818326-EP-EPT	European Procedure (Patents)	13.11.2015	4.11.2016	16863386.6	3376550			Nokia Shanghai Bell Co., Ltd.
818326-CN-UM	China	13.11.2015	13.11.2015	201520908700.0		8.6.2016	ZL201520908700.0	Nokia Shanghai Bell Co., Ltd.

818126-CN-NP	China	13.11.2015	13.11.2015	201510779868.0	CN106711574A			Nokia Shanghai Bell Co., Ltd.
818128-CN-UM	China	1.9.2015	1.9.2015	201520674093.6		3.2.2016	ZL201520674093.6	Nokia Shanghai Bell Co., Ltd.
818128-CN-NP	China	1.9.2015	1.9.2015	201516552729.4	CN106486778A			Nokia Shanghai Bell Co., Ltd.
818973-CN-UM	China	24.7.2015	24.7.2015	201520545888.7		13.1.2016	ZL201520545888.7	Nokia Shanghai Bell Co., Ltd.
818973-CN-NP	China	24.7.2015	24.7.2015	201510443832.5	CN106374215A			Nokia Shanghai Bell Co., Ltd.
817986-CN-NP	China	24.7.2015	24.7.2015	201510443833.X	CN106374294A	12.7.2019	ZL201510443833.X	Nokia Shanghai Bell Co., Ltd.
817898-CN-UM	China	20.7.2015	20.7.2015	201520528141.0		13.1.2016	ZL201520528141.0	Nokia Shanghai Bell Co., Ltd.
817898-CN-NP	China	20.7.2015	20.7.2015	201510427612.3	CN106374221A			Nokia Shanghai Bell Co., Ltd.
817890-CN-UM	China	17.7.2015	17.7.2015	201520523522.X		13.1.2016	ZL201520523522.X	Nokia Shanghai Bell Co., Ltd.
817667-CN-UM	China	27.4.2015	27.4.2015	201520266075.4		23.12.2015	ZL201520266075.4	Nokia Shanghai Bell Co., Ltd.
817667-CN-NP	China	27.4.2015	27.4.2015	201510209331.8	CN106189455A			Nokia Shanghai Bell Co., Ltd.
817650-CN-UM	China	30.4.2015	30.4.2015	201520276480.4		2.9.2015	ZL201520276480.4	Nokia Shanghai Bell Co., Ltd.
817650-CN-NP	China	30.4.2015	30.4.2015	201510217797.5	CN106207398A			Nokia Shanghai Bell Co., Ltd.
817639-US-PCT	United States of America	27.4.2015	18.4.2015	15/569956	20180159200	2.9.2020	US10770778	Nokia Shanghai Bell Co., Ltd.
817639-CN-UM	China	27.4.2015	27.4.2015	201520267320.9		30.12.2015	ZL201520267320.9	Nokia Shanghai Bell Co., Ltd.
817432-US-REI	United States of America	6.2.2015	12.10.2017	15/782407		11.2.2020	BE47835	Nokia Shanghai Bell Co., Ltd.
817239-CN-UM	China	17.2.2015	17.2.2015	201520114953.0		1.7.2015	ZL201520114953.0	Nokia Shanghai Bell Co., Ltd.

817188-CN-UM	China	29.1.2015	29.1.2015	201520065361.4		29.7.2015	ZL201520065361.4	Nokia Shanghai Bell Co., Ltd.
817152-CN-UM	China	15.2.2015	15.2.2015	201520111068.7		15.7.2015	ZL201520111068.7	Nokia Shanghai Bell Co., Ltd.
817152-CN-NP	China	15.2.2015	15.2.2015	201510082329.1	CN105990690A	18.12.2020	ZL201510082329.1	Nokia Shanghai Bell Co., Ltd.
817040-US-PCT	United States of America	5.1.2015	21.12.2015	15/541339	2018026366	10.9.2019	US10411346	Nokia Shanghai Bell Co., Ltd.
817040-CN-UM	China	5.1.2015	5.1.2015	201520007306.X		24.6.2015	ZL201520007306.X	Nokia Shanghai Bell Co., Ltd.
817040-CN-NP	China	5.1.2015	5.1.2015	201510003349.5	CN105826684A	2.7.2019	ZL201510003349.5	Nokia Shanghai Bell Co., Ltd.
817040-DE-EPT	Germany	5.1.2015	21.12.2015	15876679.0	3244479	22.12.2021	602015073992.3	Nokia Shanghai Bell Co., Ltd.
817040-FR-EPT	France	5.1.2015	21.12.2015	15876679.0	3244479	22.12.2021	3244479	Nokia Shanghai Bell Co., Ltd.
817040-GB-EPT	United Kingdom	5.1.2015	21.12.2015	15876679.0	3244479	22.12.2021	3244479	Nokia Shanghai Bell Co., Ltd.
816745-CN-NP	China	19.9.2014	19.9.2014	201410483108.0	CN105490017A	4.6.2019	ZL201410483108.0	Nokia Shanghai Bell Co., Ltd.
816685-CN-NP	China	21.10.2014	21.10.2014	201410362220.3	CN105591207A	12.3.2019	ZL201410362220.3	Nokia Shanghai Bell Co., Ltd.
816619-CN-NP	China	25.9.2014	25.9.2014	201410499883.5	CN105514580	21.9.2018	ZL201410499883.5	Nokia Shanghai Bell Co., Ltd.
816535-CN-NP	China	13.2.2015	13.2.2015	201510080402.1	CN105990684A	20.9.2019	ZL201510080402.1	Nokia Shanghai Bell Co., Ltd.
816534-CN-UM	China	31.10.2014	31.10.2014	201420646061.0		22.4.2015	ZL201420646061.0	Nokia Shanghai Bell Co., Ltd.
816534-CN-NP	China	31.10.2014	31.10.2014	201410608172.7	CN105633589A	1.3.2019	ZL201410608172.7	Nokia Shanghai Bell Co., Ltd.
815849-DE-EPA	Germany	11.12.2015	11.12.2015	15306993.5	3179634	31.4.2021	602015068311.0	Nokia Shanghai Bell Co., Ltd.
815849-FR-EPA	France	11.12.2015	11.12.2015	15306993.5	3179634	21.4.2021	3179634	Nokia Shanghai Bell Co., Ltd.

815849-GB-EPA	United Kingdom	11.12.2013	11.12.2013	15306993.5	3179634	21.4.2014	3179634	Nokia Shanghai Bell Co., Ltd.
815237-KR-PCT	South Korea / Republic of Korea	29.11.2013	4.11.2014	20167017041	2016-0091387	7.12.2017	KP101908975	Nokia Shanghai Bell Co., Ltd.
815237-CN-UM	China	29.11.2013	29.11.2013	201320776446.4		28.5.2014	ZL201320776446.4	Nokia Shanghai Bell Co., Ltd.
815237-CN-NP	China	29.11.2013	29.11.2013	201310630121.X	CN103633414A	17.8.2016	ZL201310630121.X	Nokia Shanghai Bell Co., Ltd.
815237-JP-PCD	Japan	29.11.2013	19.9.2019	2019-170597	2019-213236	30.11.2020	6802337	Nokia Shanghai Bell Co., Ltd.
815147-US-PCT	United States of America	31.12.2013	8.12.2014	157198840	20160322696	29.12.2020	US10879580	Nokia Shanghai Bell Co., Ltd.
815147-KR-PCT	South Korea / Republic of Korea	31.12.2013	8.12.2014	20167020552	2016-0102359	16.1.2019	10-1981344	Nokia Shanghai Bell Co., Ltd.
815147-CN-UM	China	31.12.2013	31.12.2013	201320891073.5		18.6.2014	ZL201320891073.5	Nokia Shanghai Bell Co., Ltd.
815147-CN-NP	China	31.12.2013	31.12.2013	201310752207.X	CN103682561A	7.8.2018	ZL201310752207.X	Nokia Shanghai Bell Co., Ltd.
815147-GB-EPT	United Kingdom	31.12.2013	8.12.2014	14875973.1	3090466	6.10.2021	3090466	Nokia Shanghai Bell Co., Ltd.
815147-DE-EPT	Germany	31.12.2013	8.12.2014	14875973.1	3090466	6.10.2021	602014080566.3	Nokia Shanghai Bell Co., Ltd.
815147-FR-EPT	France	31.12.2013	8.12.2014	14875973.1	3090466	6.10.2021	3090466	Nokia Shanghai Bell Co., Ltd.
815127-CN-UM	China	12.12.2013	12.12.2013	201320818154.2		2.7.2014	ZL201320818154.2	Nokia Shanghai Bell Co., Ltd.
815127-CN-NP	China	12.12.2013	12.12.2013	201310680395.X	CN103701535A	1.2.2019	ZL201310680395.X	Nokia Shanghai Bell Co., Ltd.
814935-CN-UM	China	24.12.2013	24.12.2013	201320860978.6		18.6.2014	ZL201320860978.6	Nokia Shanghai Bell Co., Ltd.
814784-CN-UM	China	1.11.2013	1.11.2013	201320656509.7		4.6.2014	ZL201320656509.7	Nokia Shanghai Bell Co., Ltd.

814502-US-PCT	United States of America	31.12.2013	8.12.2014	15/108941	20160329642	5.3.2019	US10224639	Nokia Shanghai Bell Co., Ltd.
814502-KR-PCT	South Korea / Republic of Korea	31.12.2013	8.12.2014	1020167020992	2016-0104699	17.7.2018	10-1881235	Nokia Shanghai Bell Co., Ltd.
814502-CN-UM	China	31.12.2013	31.12.2013	201320893224.0		13.8.2014	ZL201320893224.0	Nokia Shanghai Bell Co., Ltd.
814502-CN-NP	China	31.12.2013	31.12.2013	201310754382.2	CN103730728A	7.9.2016	ZL201310754382.2	Nokia Shanghai Bell Co., Ltd.
814502-DE-EPT	Germany	31.12.2013	8.12.2014	14879927.7	3090470	5.1.2022	602014082097.2	Nokia Shanghai Bell Co., Ltd.
814502-FR-EPT	France	31.12.2013	8.12.2014	14879927.7	3090470	5.1.2022	3090470	Nokia Shanghai Bell Co., Ltd.
814502-GB-EPT	United Kingdom	31.12.2013	8.12.2014	14879927.7	3090470	5.1.2022	3090470	Nokia Shanghai Bell Co., Ltd.
814088-US-PCT	United States of America	9.12.2013	26.11.2014	15/102943	20160305291	16.1.2018	US9871307	Nokia Shanghai Bell Co., Ltd.
814088-KR-PCT	South Korea / Republic of Korea	9.12.2013	26.11.2014	20167017978	2016-0096139	21.5.2018	KR101861939	Nokia Shanghai Bell Co., Ltd.
814088-CN-NP	China	9.12.2013	9.12.2013	201310659558.7	CN103647127A	1.2.2017	ZL201310659558.7	Nokia Shanghai Bell Co., Ltd.
814088-GB-EPT	United Kingdom	9.12.2013	26.11.2014	14870409.1	3080864	8.4.2020	3080864	Nokia Shanghai Bell Co., Ltd.
814088-DE-EPT	Germany	9.12.2013	26.11.2014	14870409.1	3080864	8.4.2020	602014063644.6	Nokia Shanghai Bell Co., Ltd.
813887-DE-EPA	Germany	23.9.2014	23.9.2014	14306461.6	EP3001499	28.4.2021	602014075954.3	Nokia Shanghai Bell Co., Ltd.
813887-FR-EPA	France	23.9.2014	23.9.2014	14306461.6	EP3001499	28.4.2021	3001499	Nokia Shanghai Bell Co., Ltd.
813887-GB-EPA	United Kingdom	23.9.2014	23.9.2014	14306461.6	EP3001499	28.4.2021	3001499	Nokia Shanghai Bell Co., Ltd.
812292-CN-NP	China	5.12.2012	5.12.2012	201210314719.8	CN103855451A	21.7.2017	ZL201210314719.8	Nokia Shanghai Bell Co., Ltd.

322911-WO-PCT	International Procedure	26.5.2021	26.5.2021	PCT/CN2021/096 103				Nokia Shanghai Bell Co., Ltd.
321952-WO-PCT	International Procedure	30.4.2021	30.4.2021	PCT/CN2021/091 677				Nokia Shanghai Bell Co., Ltd.
321068-WO-PCT	International Procedure	27.11.2020	27.11.2020	PCT/CN2020/132 437	WO2022/110061			Nokia Shanghai Bell Co., Ltd.
321068-CN-PCT	China	27.11.2020	27.11.2020	to be updated				Nokia Shanghai Bell Co., Ltd.
321068-EP-EPT	European Procedure (Patents)	27.11.2020	27.11.2020	20962951.3				Nokia Shanghai Bell Co., Ltd.
321068-US-PCT	United States of America	27.11.2020	27.11.2020	to be updated				Nokia Shanghai Bell Co., Ltd.
321067-WO-PCT	International Procedure	2.12.2020	2.12.2020	PCT/CN2020/133 417	WO2022/110261			Nokia Shanghai Bell Co., Ltd.
321067-EP-EPT	European Procedure (Patents)	2.12.2020	2.12.2020	20963149.2				Nokia Shanghai Bell Co., Ltd.
321067-US-PCT	United States of America	2.12.2020	2.12.2020	to be updated				Nokia Shanghai Bell Co., Ltd.
320735-EP-EPA	European Procedure (Patents)	19.10.2020	19.10.2020	20202473.3	3985793			Nokia Shanghai Bell Co., Ltd.
320735-US-NP	United States of America	19.10.2020	13.10.2021	17500027	20220123459			Nokia Shanghai Bell Co., Ltd.
320735-CN-NP	China	19.10.2020	12.10.2021	202111268994.2				Nokia Shanghai Bell Co., Ltd.
325712-WO-PCT	International Procedure	26.7.2022	26.7.2022	PCT/CN2022/108 025				Nokia Shanghai Bell Co., Ltd.
325150-CN-NP	China	10.5.2022	10.5.2022	202210542831.6				Nokia Shanghai Bell Co., Ltd.
325150-CN-UM	China	10.5.2022	10.5.2022	202221198213.6				Nokia Shanghai Bell Co., Ltd.

317386-US-NP	United States of America	30.9.2019	30.9.2019	16588142	20210098855	22.9.2021	US1133567	Nokia Shanghai Bell Co., Ltd
316701-US-PCT	United States of America	24.5.2019	24.5.2019	17611414				Nokia Shanghai Bell Co., Ltd
316701-EP-EPT	European Procedure (Patents)	24.5.2019	24.5.2019	19731405.7	3977369			Nokia Shanghai Bell Co., Ltd
316301-CN-PCT	China	24.5.2019	24.5.2019	201980096741.5	113275097			Nokia Shanghai Bell Co., Ltd
315969-EP-EPA	European Procedure (Patents)	18.2.2019	18.2.2019	19157715.4	3696932			Nokia Shanghai Bell Co., Ltd
318960-US-NP	United States of America	18.2.2019	18.2.2020	167289732	20200267873			Nokia Shanghai Bell Co., Ltd
166101-US-PCT	United States of America	26.12.2017	26.12.2017	16757802	20210057801	22.3.2022	US11283159	Nokia Shanghai Bell Co., Ltd
166101-CN-PCT	China	26.12.2017	26.12.2017	201780097883.4	111542965	20.7.2021	ZL201730097883.4	Nokia Shanghai Bell Co., Ltd
105672-CN-PCT	China	7.8.2018	7.8.2018	201880096425.3	112544011			Nokia Shanghai Bell Co., Ltd
817046-EP-EPT	European Procedure (Patents)	5.1.2015	21.12.2015	15876675.0	3244479	22.12.2021	3244479	Nokia Shanghai Bell Co., Ltd
819103-EP-EPT	European Procedure (Patents)	25.7.2016	25.7.2017	17749020.8	3482496	5.3.2021	3482496	Nokia Shanghai Bell Co., Ltd
820691-EP-EPA	European Procedure (Patents)	2.10.2017	2.10.2017	17306316.3	3462536	30.6.2021	3462536	Nokia Shanghai Bell Co., Ltd
818751-EP-EPA	European Procedure (Patents)	24.5.2016	24.5.2016	16505603.9	3249741	26.2.2020	3249741	Nokia Shanghai Bell Co., Ltd
819849-EP-EPA	European Procedure (Patents)	11.12.2015	11.12.2015	15306991.5	3179634	21.4.2021	3179634	Nokia Shanghai Bell Co., Ltd

325150-EP-EPA	European Procedur e (Patents)	10.5.2022	not yet known	not yet known				Nokia Shanghai Bell Co., Ltd
325150-US-NP	United States of America	10.5.2022	not yet known	not yet known				Nokia Shanghai Bell Co., Ltd

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