

ETSI Rules of Procedure, 29 November 2017

IPR INFORMATION STATEMENT AND LICENSING DECLARATION**IPR HOLDER / ORGANISATION ("Declarant")**

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IPR INFORMATION STATEMENT

In accordance with Clause 4.1 of the ETSI IPR Policy the Declarant and/or its AFFILIATES hereby informs ETSI that it is the Declarant's and/or its AFFILIATES' present belief that the IPR(s) disclosed in the attached *IPR Information Statement Annex* may be or may become ESSENTIAL in relation to at least the ETSI Work Item(s), STANDARD(S) and/or TECHNICAL SPECIFICATION(S) identified in the attached *IPR Information Statement Annex*.

The Declarant and/or its AFFILIATES (*check one box only*): are the proprietor of the IPR(s) disclosed in the attached *IPR Information Statement Annex*. are not the proprietor of the IPR(s) disclosed in the attached *IPR Information Statement Annex*.**IPR LICENSING DECLARATION**

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The construction, validity and performance of this IPR information statement and licensing declaration shall be governed by the laws of France. Terms in ALL CAPS on this form have the meaning provided in Clause 15 of the ETSI IPR Policy.

SIGNATURE

By signing this IPR Information Statement and Licensing Declaration form, you represent that you have the authority to bind the Declarant and/or its AFFILIATES to the representations and commitments provided in this form.

Name of authorized person: Dr. Mang Zhu
Title of authorized person: Chief IP Strategy Officer
Place, Date: ZTE Plaza, Mo. 55 Hi-Tech Road South, Shenzhen, China, 14/09/2018

Please return this form duly signed to: ETSI Director-General
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IPR Information Statement Annex

STANDARD, TECHNICAL SPECIFICATION or ETSI Work Item					Proprietor	Application No.	Publication No.	Patent/Application Title	Country of registration	FURTHER INFORMATION		
Disclosure Number	Project or Standard name	Work Item or Standard No.	Illustrative Specific part of the standard (e.g. Section)	Version (V.X.X.X)						Other members of this PATENT FAMILY, if any *		
					Application No.	Publication No.	Country of registration					
1	5G	TS 38.331 TS 38.201 TS 38.211 TS 38.212 TS 38.213			ZTE CORP	CN20161875409	CN107888355 A	Measurement reference signal sending method and device, and measurement reference signal receiving method and device	CHINA	WO2017CN103593	WO2018059421 A1	Patent Cooperation Treaty
2	5G	TS 38.331 TS 38.201 TS 38.211 TS 38.212 TS 38.213			ZTE CORP	CN20161877414	CN107888240 A	Beam scanning and switching method and device	CHINA	WO2017CN96199	WO2018059128 A1	Patent Cooperation Treaty
3		TS 38.331 TS 38.201 TS 38.211 TS 38.212 TS 38.213			ZTE CORP	CN20161877938	CN107889148 A	Method and apparatus for sending measurement reference signal and control channel	CHINA	WO2016CN104792	WO2018058745 A1	Patent Cooperation Treaty
4	5G	TS 38.331 TS 38.201 TS 38.211 TS 38.212 TS 38.213			ZTE CORP	CN20161877956	CN107889247 A	Uplink control information transmission/configuration indication method and apparatus, terminal and base station	CHINA	WO2017CN103690	WO2018059444 A1	Patent Cooperation Treaty
5	5G	TS 38.331 TS 38.201 TS 38.211 TS 38.212 TS 38.213			ZTE CORP	CN20161877960	CN107888198 A	Quasi-cyclic LDPC encoding and decoding method and apparatus, and LDPC encoding and decoding device	CHINA	WO2017CN104913	WO2018059588 A1	Patent Cooperation Treaty
6	5G	TS 38.331 TS 38.201 TS 38.211 TS 38.212 TS 38.213			ZTE CORP	CN20161878654	CN107889262 A	Signal sending and receiving method and device	CHINA	WO2017CN103216	WO2018059355 A1	Patent Cooperation Treaty
7	5G	TS 38.331 TS 38.201 TS 38.211 TS 38.212 TS 38.213			ZTE CORP	CN20161878700	CN107889263 A	Signal transmission method and apparatus	CHINA	WO2017CN78208	WO2018058922 A1	Patent Cooperation Treaty

8		TS 38.331 TS 38.201 TS 38.211 TS 38.212 TS 38.213		ZTE CORP	CN20161879006	CN107888361 A	Public control information transmission method, apparatus and device	CHINA	WO2017CN10533 2	WO2018059601 A1	Patent Cooperation Treaty
9	5G	TS 38.331 TS 38.201 TS 38.211 TS 38.212 TS 38.213		ZTE CORP	CN20161879150	CN107889249 A	Method and apparatus for sending and receiving downlink control channel	CHINA			
10	5G	TS 38.331 TS 38.201 TS 38.211 TS 38.212 TS 38.213		ZTE CORP	CN20161879219	CN107889250 A	Downlink resource granularity determination method, device and system	CHINA	WO2017CN10407 7	WO2018059513 A1	Patent Cooperation Treaty
11	5G	TS 38.331 TS 38.201 TS 38.211 TS 38.212 TS 38.213		ZTE CORP	CN20161879235	CN107888307 A	Interference measurement method, device and system and interference measurement indication method and device	CHINA	WO2017CN10367 0	WO2018059440 A1	Patent Cooperation Treaty
12		TS 38.331 TS 38.201 TS 38.211 TS 38.212 TS 38.213		ZTE CORP	CN20161879278	CN107888340 A	Response processing method and apparatus, response configuration method and apparatus, information transmission method and apparatus, terminal and base station	CHINA	WO2017CN10314 7	WO2018059347 A1	Patent Cooperation Treaty
13	5G	TS 38.331 TS 38.201 TS 38.211 TS 38.212 TS 38.213		ZTE CORP	CN20161879341	CN107888264 A	Channel information feedback method and device	CHINA	WO2017CN10068 6	WO2018059200 A1	Patent Cooperation Treaty
14	5G	TS 38.331 TS 38.201 TS 38.211 TS 38.212 TS 38.213		ZTE CORP	CN20161879343	CN107370489 A	Structured LDPC code data processing method and apparatus	CHINA	WO2016CN10474 4	WO2017193558 A1	Patent Cooperation Treaty
15	5G	TS 38.331 TS 38.201 TS 38.211 TS 38.212 TS 38.213		ZTE CORP	CN20161879503	CN107888331 A	Data sending method and device and information source	CHINA	WO2017CN10442 0	WO2018059548 A1	Patent Cooperation Treaty
16	5G	TS 38.331 TS 38.201 TS 38.211 TS 38.212 TS 38.213		ZTE CORP	CN20161879518	CN107465497 A	Method and apparatus for transmitting locating reference signal	CHINA	WO2016CN10468 4	WO2017206437 A1	Patent Cooperation Treaty

17	5G	TS 38.331 TS 38.201 TS 38.211 TS 38.212 TS 38.213			ZTE CORP	CN20161884876	CN107370490 A	Structured LDPC coding and decoding method and device	CHINA	WO2017CN70488	WO2017193814 A1	Patent Cooperation Treaty
18	5G	TS 38.331 TS 38.201 TS 38.211 TS 38.212 TS 38.213			ZTE CORP	CN20161895566	CN107942285 A	Method and device for measuring time difference of arrival, control device and terminal	CHINA	WO2017CN10599 5	WO2018068753 A1	Patent Cooperation Treaty
19	5G	TS 38.331 TS 38.201 TS 38.211 TS 38.212 TS 38.213			ZTE CORP	CN20161900634	CN107959647 A	Symbol configuration method, symbol configuration device, data demodulation method and data demodulation device of multi-carrier system	CHINA	WO2017CN93759	WO2018068552 A1	Patent Cooperation Treaty
20	5G	TS 38.331 TS 38.201 TS 38.211 TS 38.212 TS 38.213			ZTE CORP	CN20161907381	CN107968759 A	Data modulation method and data modulation device of multicarrier system	CHINA	WO2017CN10037 2	WO2018072565 A1	Patent Cooperation Treaty
21	5G	TS 38.331 TS 38.201 TS 38.211 TS 38.212 TS 38.213			ZTE CORP	CN201610956611	CN108024317 A	Control Information transmission method, base station and terminal	CHINA			
22	5G	TS 38.331 TS 38.201 TS 38.211 TS 38.212 TS 38.213			ZTE CORP	CN201610962502	CN108024342 A	Method and device for configuring demodulation reference signal	CHINA			
23	5G	TS 38.331 TS 38.201 TS 38.211 TS 38.212 TS 38.213			ZTE CORP	CN201610963258	CN108024344 A	Transmission configuration information acquisition method and device	CHINA			
24	5G	TS 38.331 TS 38.201 TS 38.211 TS 38.212 TS 38.213			ZTE CORP	CN201610963374	CN108024265 A	Method and apparatus for indicating DC subcarrier, and electronic device	CHINA			
25	5G	TS 38.331 TS 38.201 TS 38.211 TS 38.212 TS 38.213			ZTE CORP	CN201610963386	CN108023700 A	Feedback and configuration method and device of pilot frequency parameter, user terminal, and base station	CHINA			

26	5G	TS 38.331 TS 38.201 TS 38.211 TS 38.212 TS 38.213		ZTE CORP	CN20161963560	CN107371253 A	Information transmission method and device	CHINA	WO2017CN84333	WO2017194027 A1	Patent Cooperation Treaty
27	5G	TS 38.331 TS 38.201 TS 38.211 TS 38.212 TS 38.213		ZTE CORP	CN201610963740	CN108024293 A	Method for configuring transmission bandwidth and transmitting node	CHINA			
28		TS 38.331 TS 38.201 TS 38.211 TS 38.212 TS 38.213		ZTE CORP	CN20161965396	CN107371254 A	Information transmission method and device	CHINA	WO2017CN83820	WO2017193942 A1	Patent Cooperation Treaty
29	5G	TS 38.331 TS 38.201 TS 38.211 TS 38.212 TS 38.213		ZTE CORP	CN201610966244	CN108023671 A	Data transmission method and system, base station and user equipment	CHINA			
30	5G	TS 38.331 TS 38.201 TS 38.211 TS 38.212 TS 38.213		ZTE CORP	CN201610974050	CN108023708 A	Information sending method, apparatus and system, and related devices	CHINA			
31	5G	TS 38.331 TS 38.201 TS 38.211 TS 38.212 TS 38.213		ZTE CORP	CN201610974234	CN108024268 A	Transmission configuration method, transmission configuration determination method, base station and terminal	CHINA			
32	5G	TS 38.331 TS 38.201 TS 38.211 TS 38.212 TS 38.213		ZTE CORP	CN20161978148	CN107733831 A	Wireless signal transmission method and device	CHINA	WO2017CN96759	WO2018028621 A1	Patent Cooperation Treaty
33	5G	TS 38.331 TS 38.201 TS 38.211 TS 38.212 TS 38.213		ZTE CORP	CN201610982012	CN108024361 A	Determination method and device, access method and device, sending method and device, processing method and device, base station and terminal	CHINA			
34	5G	TS 38.331 TS 38.201 TS 38.211 TS 38.212 TS 38.213		ZTE CORP	CN201610982372	CN108024382 A	Control information transmission method and apparatus, and communication node	CHINA			

35	5G	TS 38.331 TS 38.201 TS 38.211 TS 38.212 TS 38.213			PUBLIC COMPUTE SHANGHAI DATA TECH CO LTD	CN201711378014	CN108076151 A	Platform based on NB-IOT network, and control method	CHINA			
36	5G	TS 38.331 TS 38.201 TS 38.211 TS 38.212 TS 38.213			???????????	CN201611131566	CN108234064 A		CHINA	WO2017CN113414	WO2018103556 A1	Patent Cooperation Treaty
37	5G	TS 38.331 TS 38.201 TS 38.211 TS 38.212 TS 38.213			???????????	CN201611170041	CN108206724 A		CHINA	WO2017CN114147	WO2018107980 A1	Patent Cooperation Treaty
38	5G	TS 38.331 TS 38.201 TS 38.211 TS 38.212 TS 38.213			???????????	CN201611209355	CN108242987 A		CHINA	WO2017CN117886	WO2018113760 A1	Patent Cooperation Treaty
39	5G	TS 38.331 TS 38.201 TS 38.211 TS 38.212 TS 38.213			???????????	CN201611253511	CN108271251 A		CHINA	WO2017CN109178	WO2018121052 A1	Patent Cooperation Treaty
40	5G	TS 38.331 TS 38.201 TS 38.211 TS 38.212 TS 38.213			???????????	CN2017100688	CN108271215 A		CHINA			
41	5G	TS 38.331 TS 38.201 TS 38.211 TS 38.212 TS 38.213			???????????	CN2017101578	CN108270710 A		CHINA	EP20170852323	EP3354124 A1	European Patent Office
42	5G	TS 38.331 TS 38.201 TS 38.211 TS 38.212 TS 38.213			???????????	CN2017103574	CN108271274 A		CHINA	WO2017CN105773	WO2018126756 A1	Patent Cooperation Treaty
43	5G	TS 38.331 TS 38.201 TS 38.211 TS 38.212 TS 38.213			???????????	CN2017105572	CN108270515 A		CHINA			



44	5G	TS 38.331 TS 38.201 TS 38.211 TS 38.212 TS 38.213		???????????	CN2017105573	CN108270537 A		CHINA	WO2017CN11799 4	WO2018126908 A1	Patent Cooperation Treaty
45	5G	TS 38.331 TS 38.201 TS 38.211 TS 38.212 TS 38.213		???????????	CN2017105576	CN108270538 A		CHINA	WO2017CN12015 4	WO2018127014 A1	Patent Cooperation Treaty
46	5G	TS 38.331 TS 38.201 TS 38.211 TS 38.212 TS 38.213		???????????	CN2017105652	CN108270448 A		CHINA	WO2017CN11013 3	WO2018126788 A1	Patent Cooperation Treaty
47	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214		ZTE CORP [CN]	WO2017CN10107 3	WO2018126726 A1	PAGING METHOD AND DEVICE, AND TRANSMISSION NODES	Patent Cooperation Treaty			
48	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214		???????????	CN2017107665	CN108282861 A		CHINA	WO2017CN12033 0	WO2018127025 A1	Patent Cooperation Treaty
49	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214		???????????	CN2017110964	CN108282872 A		CHINA	WO2017CN11988 4	WO2018127006 A1	Patent Cooperation Treaty
50	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214		???????????	CN2017111174	CN108282298 A		CHINA	WO2017CN11432 5	WO2018126830 A1	Patent Cooperation Treaty
51	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214		???????????	CN2017111175	CN108282299 A		CHINA	WO2017CN11108 3	WO2018126798 A1	Patent Cooperation Treaty
52	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214		???????????	CN2017111182	CN108282274 A		CHINA	WO2017CN11860 5	WO2018126848 A1	Patent Cooperation Treaty



53	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214		???????????	CN2017111207	CN108282255 A		CHINA	WO2017CN11437 4	WO2018126831 A1	Patent Cooperation Treaty
54	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214		???????????	CN2017111227	CN108282873 A		CHINA	WO2017CN11255 6	WO2018126813 A1	Patent Cooperation Treaty
55	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214		ZTE CORP	CN2017111284	CN107306147 A	Information transmission method, device and system	CHINA	WO2017CN80643	WO2017186003 A1	Patent Cooperation Treaty
56	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214		???????????	CN2017111414	CN108282307 A		CHINA	WO2017CN11596 2	WO2018126860 A1	Patent Cooperation Treaty
57	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214		???????????	CN2017111415	CN108282308 A		CHINA	WO2017CN11896 1	WO2018126965 A1	Patent Cooperation Treaty
58	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214		???????????	CN2017111423	CN108282879 A		CHINA	WO2017CN11841 6	WO2018126932 A1	Patent Cooperation Treaty
59	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214		???????????	CN2017111436	CN108282313 A		CHINA	WO2017CN11177 0	WO2018126802 A1	Patent Cooperation Treaty
60	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214		???????????	CN2017111438	CN108282314 A		CHINA	WO2017CN11535 0	WO2018126845 A1	Patent Cooperation Treaty
61	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214		???????????	CN2017111834	CN108282270 A		CHINA	WO2017CN11534 9	WO2018126844 A1	Patent Cooperation Treaty

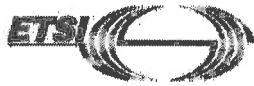


62	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214		???????????	CN2017114029	CN108289324 A		CHINA	WO2017CN12031 7	WO2018127022 A1	Patent Cooperation Treaty
63		TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214		???????????	CN2017114036	CN108289325 A		CHINA	WO2018CN71979	WO2018127208 A1	Patent Cooperation Treaty
64	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214		???????????	CN2017114261	CN108289005 A		CHINA	WO2017CN12034 7	WO2018127028 A1	Patent Cooperation Treaty
65	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214		???????????	CN2017114262	CN108288988 A		CHINA	WO2017CN11958 1	WO2018126987 A1	Patent Cooperation Treaty
66	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214		???????????	CN2017114271	CN108289017 A		CHINA	WO2017CN12033 6	WO2018127027 A1	Patent Cooperation Treaty
67	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214		???????????	CN2017114453	CN108289330 A		CHINA	WO2017CN11809 5	WO2018126913 A1	Patent Cooperation Treaty
68	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214		???????????	CN2017114912	CN108289311 A		CHINA	WO2017CN11075 3	WO2018126792 A1	Patent Cooperation Treaty
69	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214		???????????	CN2017114912	CN108289311 A		CHINA	WO2017CN11075 3	WO2018126792 A1	Patent Cooperation Treaty
70	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214		???????????	CN2017114926	CN108288990 A		CHINA	WO2017CN11509 0	WO2018126843 A1	Patent Cooperation Treaty

71	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214		???????????	CN2017115086	CN108289336 A		CHINA	WO2017CN11983 1	WO2018127001 A1	Patent Cooperation Treaty
72	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214		???????????	CN2017119333	CN108306841 A		CHINA	WO2017CN11341 5	WO2018130017 A1	Patent Cooperation Treaty
73	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214		???????????	CN2017147388	CN108347290 A		CHINA			
74	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214		???????????	CN20171054986	CN108347769 A		CHINA	WO2017CN11579 9	WO2018137429 A1	Patent Cooperation Treaty
75	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214		???????????	CN2017156532	CN108288966 A		CHINA	WO2018CN71956	WO2018127206 A1	Patent Cooperation Treaty
76	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214		???????????	CN20171057570	CN108366029 A		CHINA	WO2017CN11959 3	WO2018137466 A1	Patent Cooperation Treaty
77	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214		???????????	CN20171060088	CN108347320 A		CHINA	WO2017CN11850 2	WO2018137453 A1	Patent Cooperation Treaty
78	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214		ZTE CORP	CN20171060362	CN108024383 A	Data sending method, data receiving method, data sending device, data receiving device and electronic equipment	CHINA			
79	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214		???????????	CN20171060654	CN108347766 A		CHINA	WO2017CN11419 6	WO2018137409 A1	Patent Cooperation Treaty



80	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214			???????????	CN20171061608	CN108365932 A		CHINA	WO2017CN11927 7	WO2018137483 A1	Patent Cooperation Treaty
81	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214			???????????	CN20171061641	CN108366381 A		CHINA	WO2017CN12032 9	WO2018137472 A1	Patent Cooperation Treaty
82	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214			???????????	CN20171064571	CN108401292 A		CHINA	WO2017CN11654 4	WO2018141180 A1	Patent Cooperation Treaty
83	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214			???????????	CN20171064573	CN108401283 A		CHINA	WO2018CN74992	WO2018141258 A1	Patent Cooperation Treaty
84	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214			???????????	CN20171065012	CN108400851 A		CHINA	WO2018CN74905	WO2018141250 A1	Patent Cooperation Treaty
85	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214			???????????	CN20171067221	CN108400853 A		CHINA	WO2018CN75027	WO2018141261 A1	Patent Cooperation Treaty
86	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214			???????????	CN20171067272	CN108400854 A		CHINA	WO2017CN12031 3	WO2018141180 A1	Patent Cooperation Treaty
87	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214			???????????	CN2017167273	CN108400808 A		CHINA			
88	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214			???????????	CN20171067275	CN108400803 A		CHINA	WO2018CN71654	WO2018141196 A1	Patent Cooperation Treaty



89	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214		??????????	CN20171067282	CN108401268 A		CHINA	WO2018CN75368	WO2018141301 A1	Patent Cooperation Treaty
90	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214		??????????	CN2017167383	CN108400834 A		CHINA			
91	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214		??????????	CN20171067997	CN108400855 A		CHINA	WO2018CN79023	WO2018145668 A1	Patent Cooperation Treaty
92	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214		??????????	CN20171068023	CN108400843 A		CHINA	WO2017CN11287 8	WO2018145502 A1	Patent Cooperation Treaty
93	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214		??????????	CN2017168394	CN108400845 A		CHINA			
94	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214		??????????	CN20171073271	CN108400837 A		CHINA	WO2018CN73507	WO2018141214 A1	Patent Cooperation Treaty
95	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214		??????????	CN20171073272	CN108400950 A		CHINA	WO2018CN75369	WO2018141302 A1	Patent Cooperation Treaty
96	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214		??????????	CN20171075279	CN108391313 A		CHINA	WO2018CN75021	WO2018141260 A1	Patent Cooperation Treaty
97	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214		??????????	CN2017180047	CN108289010 A		CHINA	WO2018CN71887	WO2018127198 A1	Patent Cooperation Treaty



98	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214		???????????	CN2017181555	CN108429601 A		CHINA			
99	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214		???????????	CN2017181769	CN108429602 A		CHINA			
100	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214		ZTE CORP	CN2017186083	CN107733622 A	Resource distribution and determination method and device	CHINA	WO2017CN97216	WO2018028696 A1	Patent Cooperation Treaty
101	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214		???????????	CN20171184062	CN108429603 A		CHINA			
102	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214		???????????	CN20171184706	CN108429553 A		CHINA			
103	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214		???????????	CN20171184863	CN108288991 A		CHINA	WO2017CN11177 1	WO2018126803 A1	Patent Cooperation Treaty
104	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214		???????????	CN20171186529	CN108400856 A		CHINA			
105	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214		ZTE CORP	CN201710229770	CN108024363 A	Interference processing method and Interference processing device	CHINA			
106	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214		???????????	CN20171317004	CN108270522 A		CHINA	WO2017CN11849 8	WO2018121500 A1	Patent Cooperation Treaty

107	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214		ZTE CORP	CN20171280615	CN107889212 A	Positioning method and device	CHINA	WO2017CN101651	WO2018059240 A1	Patent Cooperation Treaty
108	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214		ZTE CORP	CN20161666794	CN107371272 A	Downlink control information transmitting method, device and system	CHINA	WO2017CN84279	WO2017194022 A1	Patent Cooperation Treaty
109		TS 38.321 TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214		ZTE CORP	CN20131676444	CN104717659 A	Downlink pilot frequency transmission method and device	CHINA	WO2014CN77804	WO2014187294 A1	Patent Cooperation Treaty
110	5G	TS 38.321 TS 38.331 TS 38.211 TS 38.212 TS 38.213		ZTE CORP	CN20131693384	CN104716998 A	Reference signal transmitting method and device	CHINA	WO2014CN79110	WO2014187388 A1	Patent Cooperation Treaty
111	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214		ZTE CORP	CN20131714043	CN104735720 A	Machine class communication service information transmission method, base station, terminals and system	CHINA	WO2014CN78290	WO2014187358 A1	Patent Cooperation Treaty
112	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214		ZTE CORP	CN20131714909	CN104734826 A	Extremely big bandwidth data sending control method and extremely big bandwidth data sending equipment	CHINA	US201415105984	US2017034824 A1	UNITED STATES
113	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214		ZTE CORP	CN20131714911	CN104734761 A	Uplink and downlink wave beam mixture indicating method, base station, terminal and system	CHINA	US201415105477	US2017026102 A1	UNITED STATES
									WO2014CN81412	WO2015090034 A1	Patent Cooperation Treaty
114	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214		ZTE CORP	CN20131714913	CN103716081 A	Downlink beam determination method, apparatus and system	CHINA	US201415106465	US2016373180 A1	UNITED STATES
									WO2014CN81287	WO2015090032 A1	Patent Cooperation Treaty

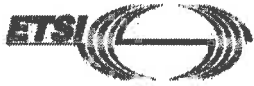
115	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214			ZTE CORP	CN20131719589	CN104734763 A	Method, system and device for indicating and receiving uplink wave beam index	CHINA	US201415105161	US2016359536 A1	UNITED STATES
										WO2014CN82438	WO2015090058 A1	Patent Cooperation Treaty
116	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214			?????????? ZTE CORPORATION,	CN20131749784	CN104753573 B	Space division multiplexing implementation method, system, base station and terminal	CHINA	WO2014CN79274	WO2015100939 A1	Patent Cooperation Treaty
117	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214			?????????? ZTE CORPORATION,	CN2014173527	CN104883237 B	Data transmission method, apparatus and system	CHINA	EP20140884228	EP3101830 B1	European Patent Office
										JP20160554627	JP2017512435 A	JAPAN
										US201415120734	US2017012746 A1	UNITED STATES
										WO2014CN85150	WO2015127770 A1	Patent Cooperation Treaty
118	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214			ZTE CORP	CN2014177620	CN104202073 A	Channel information feedback method, pilot frequency and wave beam transmitting methods, systems and devices	CHINA	EP20140884360	EP3116140 A4	European Patent Office
										JP20160555612	JP2017512441 A	JAPAN
										US201415123304	US2017085303 A1	UNITED STATES
										WO2014CN84568	WO2015131494 A3	Patent Cooperation Treaty
119	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214			ZTE CORP	CN20141284300	CN105323747 A	Feedback method for terminal capability indicating parameters, feedback processing method for terminal capability indicating parameters, and feedback processing apparatus for terminal capability indicating parameters	CHINA	WO2014CN86759	WO2015196589 A1	Patent Cooperation Treaty
120	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214			?????????? ZTE CORPORATION,	CN20141340162	CN104202276 B	Channel information quantized feedback method and device and data precoding method and device	CHINA	EP20150822802	EP3171560 A4	European Patent Office
										US201515328218	US2017272133 A1	UNITED STATES
										WO2015CN78811	WO2016008330 A1	Patent Cooperation Treaty
121	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214			ZTE CORP	CN20141416492	CN105376723 A	Method of realizing wireless link processing, base station and terminal	CHINA	EP20150776190	EP3185597 A4	European Patent Office
										US201515504327	US2017302776 A1	UNITED STATES
										WO2015CN75862	WO2015154642 A1	Patent Cooperation Treaty
122	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214			ZTE CORP	CN20141422875	CN105375962 A	Method for sending and receiving reference signal and communication node	CHINA	US201515506258	US2017302420 A1	UNITED STATES
										WO2015CN75863	WO2015184918 A1	Patent Cooperation Treaty

123	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214			ZTE CORP	CN20141427711	CN105376841 A	Method for realizing communication mode adjustment, micro base station and macro base station	CHINA	EP20150776694	EP3179667 A4	European Patent Office
										JP20170511594	JP2017529777 A	JAPAN
										US201515506755	US2017373818 A1	UNITED STATES
										WO2015CN75880	WO2015154644 A1	Patent Cooperation Treaty
124	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214			????????? ZTE CORPORATION,	CN201410456513	CN105472761 B	User equipment access method and device	CHINA			
125	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214			ZTE CORP	CN20141468890	CN105490787 A	Downlink pilot frequency transmission method, detection method, device, base station, and terminal	CHINA	EP20150842269	EP3197067 A4	European Patent Office
										US201515511339	US2017264412 A1	UNITED STATES
										WO2015CN78895	WO2016041368 A1	Patent Cooperation Treaty
126	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214			ZTE CORP	CN20141476739	CN105490719 A	Uplink synchronization method, device and system	CHINA	EP20150842659	EP3197064 A4	European Patent Office
										US201515511962	US2017265184 A1	UNITED STATES
										WO2015CN78393	WO2016041358 A1	Patent Cooperation Treaty
127	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214			????????? ZTE CORPORATION,	CN20141487404	CN105515730 B	Channel information feedback method, channel information feedback device and channel information feedback system	CHINA	WO2015CN75569	WO2016045342 A1	Patent Cooperation Treaty
128	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214			ZTE CORP	CN20141583730	CN105530685 A	Message sending and receiving method, sending and receiving device, base station and terminal	CHINA	EP20150852759	EP3211956 A4	European Patent Office
										US201515521479	US2017339718 A1	UNITED STATES
										WO2015CN85632	WO2016062147 A1	Patent Cooperation Treaty
129	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214			ZTE CORP	CN20141613954	CN105554695 A	Method for realizing position confirmation, base station, and terminal	CHINA	WO2015CN77004	WO2015184929 A1	Patent Cooperation Treaty
130	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214			ZTE CORP	CN20141751130	CN105744591 A	Network access processing and network access method and device	CHINA	US201515534610	US2017367030 A1	UNITED STATES
										WO2015CN99860	WO2016091223 A1	Patent Cooperation Treaty

131	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214			???????????	CN20141758057	CN105744639 B	Method and device for sending and receiving random access configuration information	CHINA	EP20150867482	EP3232726 A4	European Patent Office
										US201515535308	US2017332403 A1	UNITED STATES
										WO2015CN76489	WO2016090782 A1	Patent Cooperation Treaty
132	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214			ZTE CORP	CN20141776357	CN104535961 A	Wireless positioning implementing method and system and positioning position computing device	CHINA	EP20150803271	EP3220699 A4	European Patent Office
										US201515535714	US2017359795 A1	UNITED STATES
										WO2015CN71151	WO2015184817 A1	Patent Cooperation Treaty
133	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214			ZTE CORP	CN20141802307	CN105763294 A	Control information processing method and device	CHINA			
134	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214			ZTE CORP	CN20141830315	CN105792358 A	Channel obtaining signal configuring and generating method and device	CHINA	EP20150871721	EP3240343 A4	European Patent Office
										WO2015CN88519	WO2016101647 A1	Patent Cooperation Treaty
135	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214			ZTE CORP	CN2015152210	CN105991217 A	Signaling transmission method and device	CHINA	WO2015CN85796	WO2016119424 A1	Patent Cooperation Treaty
136	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214			ZTE CORP	CN2015181614	CN105991159 A	Data transmission method and apparatus	CHINA	EP20160748547	EP3249824 A4	European Patent Office
										JP20170542115	JP2018509084 A	JAPAN
										KR20177022470	KR20170106386 A	KOREA (REPUBLIC OF)
										US201615550231	US2018034501 A1	UNITED STATES
										WO2016CN70416	WO2016127746 A1	Patent Cooperation Treaty
137	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214			ZTE CORP	CN20151111331	CN106034006 A	Processing method and processing device for channel state measurement pilot frequency	CHINA	WO2016CN73115	WO2016145952 A1	Patent Cooperation Treaty
138	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214			ZTE CORP	CN20151263343	CN106301723 A	Transmitting method, receiving method, transmitting device and receiving device for downlink data	CHINA	WO2016CN79094	WO2016184275 A1	Patent Cooperation Treaty



139	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214		ZTE CORP	CN2016182592	CN107046714 A	Data transmission method, device and system	CHINA	WO2016CN105830	WO2017133295 A1	Patent Cooperation Treaty
140	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214		ZTE CORP	CN20161164882	CN106027197 A	Transmission parameter determination method and device	CHINA	US201615561291	US2018131428 A1	UNITED STATES
									WO2016CN75548	WO2016155458 A1	Patent Cooperation Treaty
141	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214		???????????	CN20161961704	CN108377518 A		CHINA	WO2017CN109162	WO2018082623 A1	Patent Cooperation Treaty
142	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214		ZTE CORP	CN201711147938	CN108111287 A	Signal sending and receiving method and apparatus, and computer storage medium	CHINA			
143	5G	TS 38.331 TS 38.211 TS 38.212 TS 38.213 TS 38.214		???????????	CN2018131211	CN108259153 A		CHINA			
144	5G	TS 38.321 TS 38.331 TS 38.211 TS 38.212 TS 38.213		ZTE CORP	CN20151179118	CN106160937 A	Method and device for segmenting code block	CHINA	EP20160779550	EP3285423 A4	European Patent Office
									JP20170551222	JP2018516477 A	JAPAN
									KR20177033133	KR20170139584 A	KOREA (REPUBLIC OF)
									US201615566771	US2018123847 A1	UNITED STATES
									WO2016CN78586	WO2016165575 A1	Patent Cooperation Treaty
145	5G	TS 38.321 TS 38.331 TS 38.211 TS 38.212 TS 38.213		ZTE CORP	CN20151200681	CN106162614 A	Feedback method and device	CHINA	WO2016CN76119	WO2016169352 A1	Patent Cooperation Treaty
146	5G	TS 38.321 TS 38.331 TS 38.211 TS 38.212 TS 38.213		ZTE CORP	CN201510502297	CN106470062 A	Data transmission method and system	CHINA			



147	5G	TS 38.321 TS 38.331 TS 38.211 TS 38.212 TS 38.213			???????????	CN2017164278	CN108400830 A		CHINA			
148	5G	TS 38.321 TS 38.331 TS 38.211 TS 38.212 TS 38.213			ZTE CORP	CN201710313919	CN108111267 A	Signal transmission method and system and control information sending method and device	CHINA			
149	5G	TS 38.321 TS 38.331 TS 38.211 TS 38.212 TS 38.213			ZTE CORP	CN201710459098	CN108111263 A	Feedback method and device of confirmation message, and receiving method and device of confirmation message	CHINA			
150	5G	TS 38.321 TS 38.331 TS 38.211 TS 38.212 TS 38.213			ZTE CORP	CN20161659046	CN107733501 A	Beam management method and device	CHINA	WO2017CN94323	WO2018028426 A1	Patent Cooperation Treaty

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