## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT7909785

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

#### **CONVEYING PARTY DATA**

Name	Execution Date
FG INNOVATION COMPANY LIMITED	08/10/2021

#### **RECEIVING PARTY DATA**

Name:	HANNIBAL IP LLC	
Street Address:	5204 BLUEWATER DRIVE	
City:	FRISCO	
State/Country:	y: TEXAS	
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#### **PROPERTY NUMBERS Total: 1**

Property Type	Number	
Application Number:	18136449	

#### **CORRESPONDENCE DATA**

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ATTORNEY DOCKET NUMBER:	64365-0145
NAME OF SUBMITTER:	JAMES J. DADE
SIGNATURE:	/James J. Dade/
DATE SIGNED:	04/19/2023

#### **Total Attachments: 7**

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#### Patent Assignment

This patent assignment ("Assignment") is entered into as of Agust. /o, 2021 (the "Effective Date"), by and between FG Innovation Company Ltd., with a principal place of business at Flat 2623, 26/F Tuen Mun Central Square 22 Hoi Wing Road, Tuen Mun, New Territories, HK. ("Assignor"), and Hannibal IP LLC, a Texas Limited Liability Company, with principal place of business at 5204 Bluewater Dr., Frisco, TX 75036, USA ("Assignce").

For good and valuable consideration, the receipt of which is hereby acknowledged, Assignor hereby irrevocably assigns, sells, grants, transfers and conveys and agrees to assign, sell, grant, transfer, and convey to Assignee, and Assignee hereby accepts and receives, all right, title, and interest throughout the world in and to:

- (a) the issued patents and pending patent applications identified on Schedule 1 attached hereto and any issued patent or patent application that directly or indirectly claims or is amended to claim priority to any of the above, in whole or in part (the "Patents");
- (b) to the extent not included in (a), all issued patents, rights to inventions and pending and future applications for patents under U.S. law or regulation or of any foreign country with respect to the patentable inventions from which such Patents arise, including without limitation utility patents, utility models, design patents, invention certificates, provisionals, continuations, divisionals, continuations-in-part, reexaminations, reissues, extensions and renewals, in all countries of the world, as well as any patents and patent applications to which any of the Patents or any of the foregoing directly or indirectly claim priority, in whole or in part (subcategories (a) and (b) collectively, the "Patents");
- (c) all causes of action (whether known or unknown or whether currently pending, filed or otherwise) and other enforcement rights under or on account of the Patents, including without limitation all causes of action and other enforcement rights for damages, injunctive relief, and any other remedies of any kind for past, current and future infringement; and
- (d) all rights to collect royalties or other payments under or on account of the Patents and the foregoing subcategory (c).

Assignor agrees upon request (and at the expense) of Assignee to, and if Assignor is unable or unwilling to do so authorizes Assignee to act in Assignor's name to: execute all oaths, assignments, powers, and any other papers necessary to perform Assignor's obligations hereunder, testify in any proceeding, and otherwise take any action, and fully cooperate with Assignee to perform Assignor's obligations hereunder, in each case, related to securing and enforcing Assignee's rights related to this Assignment.

The terms and conditions of this Assignment will inure to the benefit of Assignee, its successors, assigns, and other legal representatives and will be binding upon Assignor, its successors, assigns, and other legal representatives.

IN WITNESS WHEREOF, the parties hereto have caused this Assignment to be executed as of the Effective Date. The individuals signing for the parties represent and warrant that he or she has authority to sign for and enter into this Assignment on behalf of the respective parties.

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FG Innovation Company Ltd.

Ву:		Mag	Show	
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Name: Chie Ming Chou

Title: CEO

Date: 8/10, 202/

Assignee:

Hannibal IP LLC

By:	Khaled Fekih Rondham	
	**************************************	

Name:

Khaled Fekih-Romdhane

Title:

Manager

Date:

10 August, 2021

## **SCHEDULE 1**

# PATENTS AND PATENT APPLICATIONS

Family	Patent Office	Application No.	Pub. / Issue No.	Title
2	WO	PCT/CN2019/112403	WO2020/088295A1	METHODS AND APPARATUSES OF DETERMINING QUASI CO-LOCATION (QCL) ASSUMPTIONS FOR BEAM OPERATIONS
2	US	16/660726	US11057896B2	METHODS AND APPARATUSES OF DETERMINING QUASI CO-LOCATION (QCL) ASSUMPTIONS FOR BEAM OPERATIONS
2	JР	特願 2021-523200		ビーム動作のための擬似コロケーション(Q C L )想定を決定する方法及 び装置
2	IN	202147019446	202147019446A	METHODS AND APPARATUSES OF DETERMINING QUASI CO-LOCATION (QCL) ASSUMPTIONS FOR BEAM OPERATIONS
2	CN	201980071732.0	CN113039740A	确定用于波束操作的准共址(QCL)假设的方法 和装置
2	US	17/313283		METHODS AND APPARATUSES FOR BEAM OPERATIONS
2	EP	19880818.0		METHODS AND APPARATUSES OF DETERMINING QUASI CO-LOCATION (QCL) ASSUMPTIONS FOR BEAM OPERATIONS
2	KR	1020217016222	KR1020210076989A	빔 동작들을 위한 준-공동위치(QCL) 가정들을 결정하는 방법들 및 장치들
3	WO	PCT/CN2019/116610	WO2020/094124A1	METHOD AND APPARATUS FOR UPLINK TRANSMISSION
3	US	16/678766	US20200154469A1	METHOD AND APPARATUS FOR UPLINK TRANSMISSION
3	JР	2021-524971		METHOD AND APPARATUS FOR UPLINK TRANSMISSION
3	CN	201980074380.4	CN113016226A	用于上行链路传输的方法和设备
3	IN	202147023555		METHOD AND APPARATUS FOR UPLINK TRANSMISSION

3	EP	19883305.5		METHOD AND APPARATUS FOR UPLINK TRANSMISSION
3	KR	10-2021-7017266		METHOD AND APPARATUS FOR UPLINK TRANSMISSION
4	WO	PCT/CN2019/124581	WO2020/119723A1	METHODS AND APPARATUSES FOR COLLISION CONTROL OF SIDELINK COMMUNICATIONS IN WIRELESS COMMUNICATION SYSTEMS
4	US	16/710666	US20200196255A1	METHODS AND APPARATUSES FOR COLLISION CONTROL OF SIDELINK COMMUNICATIONS IN WIRELESS COMMUNICATION SYSTEMS
4	CN	201980082613.5		无线通信系统中用于侧链路通信的冲突控制的方 法和装置
4	EP	19895031.3		Method and Apparatus for SFCI feedback enhancement in V2X unicast and groupcast
4	IN			Method and Apparatus for SFCI feedback enhancement in V2X unicast and groupcast
6	WO	PCT/CN2020/071180	WO2020/143711A1	SCHEDULING FOR POWER SAVING STATE IN NEXT GENERATION WIRELESS NETWORKS
6	US	16/739780	US20200229098A1	SCHEDULING FOR POWER SAVING STATE IN NEXT GENERATION WIRELESS NETWORKS
6	CN	202080007807.1		下一代无线网络中用于省电状态下的用户设备的 调度方法和用户设备
6	EP			SCHEDULING FOR POWER SAVING STATE IN NEXT GENERATION WIRELESS NETWORKS
6	IN			SCHEDULING FOR POWER SAVING STATE IN NEXT GENERATION WIRELESS NETWORKS
7	WO	PCT/CN2020/070940	WO2020/143672A1	METHOD AND APPARATUS FOR LBT FAILURE DETECTION
7	US	16/737787	US20200221495A1	METHOD AND APPARATUS FOR LBT FAILURE DETECTION
7	CN	Wait for the notification from CNIPA		用于LBT失败检测的方法和设备
7	EP			METHOD AND APPARATUS FOR LBT FAILURE DETECTION

7	IN			SCHEDULING FOR POWER SAVING STATE IN NEXT GENERATION WIRELESS NETWORKS
7	ID			METHOD AND APPARATUS FOR LBT FAILURE DETECTION
7	MX	MX/a/2021/008190		METHOD AND APPARATUS FOR LBT FAILURE DETECTION
7	VN			METHOD AND APPARATUS FOR LBT FAILURE DETECTION
8	US	15/969785	US20180323908A1	SYSTEM INFORMATION TRANSMISSION METHOD AND WIRELESS COMMUNICATION SYSTEM
10	US	16/427371	US10911201B2	Methods and apparatuses for multi-TRP transmission
10	WO	PCT/CN2019/089656	WO2019/233352A1	METHODS AND APPARATUSES FOR MULTI- TRP TRANSMISSION
10	CN	201980019800.9	CN112204899A	用于多 TRP 传输的方法和装置
10	EP	19815117.7	EP3804154A1	METHODS AND APPARATUSES FOR MULTI- TRP TRANSMISSION
11	US	16/533635	US20200053743A1	METHOD AND APPARATUS FOR POWER CONTROL OF WIRELESS COMMUNICATIONS
11	WO	PCT/CN2019/099538	WO2020/029985A1	METHOD AND APPARATUS FOR POWER CONTROL OF WIRELESS COMMUNICATIONS
11	EP	19846877.9	-	METHOD AND APPARATUS FOR POWER CONTROL OF WIRELESS COMMUNICATIONS
11	CN	201980046276.4	CN112514485A	用于无线通信的功率控制的方法和设备
12	US	16/791778	US20200266876A1	METHOD AND APPARATUS FOR SCELL BEAM FAILURE RECOVERY CONFIGURATION
12	WO	PCT/CN2020/075234	WO2020/164579A1	METHOD AND APPARATUS FOR SCELL BEAM FAILURE RECOVERY CONFIGURATION
12	EP	20755819.8		METHOD AND APPARATUS FOR SCELL BEAM FAILURE RECOVERY CONFIGURATION

12	CN			Co-existence for multiple SCell Beam Failure Recovery Procedures
13	US	16/859945	US20200351784A1	METHOD OF PHYSICAL DOWNLINK CONTROL CHANNEL MONITORING AND RELATED DEVICE
13	WO	PCT/CN2020/087653	WO2020/221269A1	METHOD OF PHYSICAL DOWNLINK CONTROL CHANNEL MONITORING AND RELATED DEVICE
13	TW	109114169	TW202046780A	METHOD OF PHYSICAL DOWNLINK CONTROL CHANNEL MONITORING AND RELATED DEVICE
14	US	16/913577	US20200413425A1	METHOD AND APPARATUS FOR CONFIGURING PRIORITY OF UCI
14	WO	PCT/CN2020/098239	WO2020/259622A1	METHOD AND APPARATUS FOR CONFIGURING PRIORITY OF UCI
15	WO	PCT/CN2020/102365	WO2021/008582A1	METHOD AND APPARATUS FOR SIDELINK OPERATION
15	US	16/931439	US20210022055A1	METHOD AND APPARATUS FOR SIDELINK OPERATION
16	US	16/937414	US20210029724A1	METHODS AND APPARATUSES FOR SCHEDULING REQUEST RESOURCE PRIORITIZATION FOR BEAM FAILURE RECOVERY
16	WO	PCT/CN2020/103895	WO2021/018010A1	METHODS AND APPARATUSES FOR SCHEDULING REQUEST RESOURCE PRIORITIZATION FOR BEAM FAILURE RECOVERY
17	US	16/991015	US20210051584A1	METHOD OF MONITORING PHYSICAL DOWNLINK CONTROL CHANNEL FOR POWER SAVING SIGNAL AND RELATED DEVICE
17	WO	PCT/CN2020/106888	WO2021/027640A1	METHOD OF MONITORING PHYSICAL DOWNLINK CONTROL CHANNEL FOR POWER SAVING SIGNAL AND RELATED DEVICE
18	US	17/025981	US20210092621A1	METHOD OF PERFORMING CELL SELECTION OR RESELECTION AND RELATED DEVICE
19	US	16/842642	US20200322109A1	METHOD OF DERIVING QCL ASSUMPTION IN MULTI-PANEL TRANSMISSION AND RELATED DEVICE
19	WO	PCT/CN2020/083484	WO2020/207374A1	METHOD OF DERIVING QCL ASSUMPTION IN MULTI-PANEL TRANSMISSION AND RELATED DEVICE
20	US	16/991017	US20210051668A1	METHODS AND APPARATUSES FOR UPLINK TRANSMISSION MANAGEMENT

RECORDED: 09/19/2023

20	WO	PCT/CN2020/108260	WO2021/031910A1	METHODS AND APPARATUSES FOR UPLINK TRANSMISSION MANAGEMENT
21	US	17/038436	US20210105101A1	METHOD AND APPARATUS FOR HANDLING LCP RESTRICTION AND HARQ PROCESS NUMBER
22	WO	PCT/CN2020/119518	WO2021/063405A1	METHODS AND APPARATUSES FOR HARQ CODEBOOK CONSTRUCTION
23	US	17/085468		METHODS AND APPARATUSES FOR DEFAULT SPATIAL RELATION INFORMATION DETERMINATION
23	WO	PCT/CN2020/125455		METHODS AND APPARATUSES FOR DEFAULT SPATIAL RELATION INFORMATION DETERMINATION