

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT6964092

SUBMISSION TYPE:	NEW ASSIGNMENT	
NATURE OF CONVEYANCE:	ASSIGNMENT	
CONVEYING PARTY DATA		
	Name	Execution Date
	ALIBABA GROUP HOLDING LIMITED	08/26/2020
RECEIVING PARTY DATA		
Name:	ADVANTAGEOUS NEW TECHNOLOGIES CO., LTD.	
Street Address:	27 HOSPITAL ROAD	
Internal Address:	CAYMAN CORPORATE CENTRE	
City:	GEORGE TOWN, GRAND CAYMAN	
State/Country:	CAYMAN ISLANDS	
Postal Code:	KY1-9008	
PROPERTY NUMBERS Total: 1		
	Property Type	Number
	Application Number:	17403590
CORRESPONDENCE DATA		
Fax Number:	(877)769-7945	
<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>		
Phone:	+1 (212) 641-2232	
Email:	nagle@fr.com, apsi@fr.com	
Correspondent Name:	ALEXANDER BERG	
Address Line 1:	FISH & RICHARDSON P.C.	
Address Line 2:	P.O.BOX 1022	
Address Line 4:	MINNEAPOLIS, MINNESOTA 55440-1022	
ATTORNEY DOCKET NUMBER:	44892-0409003/PCT19965USC	
NAME OF SUBMITTER:	SARAH NAGLE	
SIGNATURE:	/Sarah Nagle/	
DATE SIGNED:	10/12/2021	
Total Attachments: 38		
source=2-Alibaba_to_Advantageous_#page1.tif		
source=2-Alibaba_to_Advantageous_#page2.tif		
source=2-Alibaba_to_Advantageous_#page3.tif		
source=2-Alibaba_to_Advantageous_#page4.tif		

source=2-Alibaba_to_Advantageous_#page5.tif
source=2-Alibaba_to_Advantageous_#page6.tif
source=2-Alibaba_to_Advantageous_#page7.tif
source=2-Alibaba_to_Advantageous_#page8.tif
source=2-Alibaba_to_Advantageous_#page9.tif
source=2-Alibaba_to_Advantageous_#page10.tif
source=2-Alibaba_to_Advantageous_#page11.tif
source=2-Alibaba_to_Advantageous_#page12.tif
source=2-Alibaba_to_Advantageous_#page13.tif
source=2-Alibaba_to_Advantageous_#page14.tif
source=2-Alibaba_to_Advantageous_#page15.tif
source=2-Alibaba_to_Advantageous_#page16.tif
source=2-Alibaba_to_Advantageous_#page17.tif
source=2-Alibaba_to_Advantageous_#page18.tif
source=2-Alibaba_to_Advantageous_#page19.tif
source=2-Alibaba_to_Advantageous_#page20.tif
source=2-Alibaba_to_Advantageous_#page21.tif
source=2-Alibaba_to_Advantageous_#page22.tif
source=2-Alibaba_to_Advantageous_#page23.tif
source=2-Alibaba_to_Advantageous_#page24.tif
source=2-Alibaba_to_Advantageous_#page25.tif
source=2-Alibaba_to_Advantageous_#page26.tif
source=2-Alibaba_to_Advantageous_#page27.tif
source=2-Alibaba_to_Advantageous_#page28.tif
source=2-Alibaba_to_Advantageous_#page29.tif
source=2-Alibaba_to_Advantageous_#page30.tif
source=2-Alibaba_to_Advantageous_#page31.tif
source=2-Alibaba_to_Advantageous_#page32.tif
source=2-Alibaba_to_Advantageous_#page33.tif
source=2-Alibaba_to_Advantageous_#page34.tif
source=2-Alibaba_to_Advantageous_#page35.tif
source=2-Alibaba_to_Advantageous_#page36.tif
source=2-Alibaba_to_Advantageous_#page37.tif
source=2-Alibaba_to_Advantageous_#page38.tif

Patent Assignment

This Patent Assignment (this "Assignment") with an effective date of August 24, 2020 (the "Effective Date") by Alibaba Group Holding Limited, a company duly authorized under the laws of Cayman Islands and having an address at Fourth Floor, One Capital Place, P.O. Box 847, George Town, Grand Cayman, Cayman Islands (hereinafter the "Assignor") witnesseth:

WHEREAS, Assignor is the owner of certain rights, title and interest in and to the patents and patent applications set forth on Schedule A hereto (hereinafter the "Patents and Applications");

WHEREAS, Advantageous New Technologies Co., Ltd., a company duly organized under and pursuant to the laws of Cayman Islands and having an address at Cayman Corporate Centre, 27 Hospital Road, George Town, Grand Cayman KY1-9008, Cayman Islands (hereinafter the "Assignee"), is desirous of acquiring Assignor's entire right, title and interest in and to said Patents and Applications, and in and to any Letters Patent or Patents to be obtained therefor and thereon;

NOW, THEREFORE, for good and valuable consideration, the receipt and adequacy of which is hereby acknowledged, Assignor has as of the Effective Date sold, assigned, transferred and conveyed, and does hereby sell, assign, transfer and convey, unto Assignee, all of Assignor's rights, titles and interests in and to the Patents and Applications, and any and all Letters Patent or Patents in the United States of America and all foreign countries which may be granted therefor and thereon, for its own use and behalf and the use and behalf of its successors, legal representatives and assigns, to the full end of the term or terms for which Letters Patent or Patents may be granted, as fully and entirely as the same would have been held and enjoyed by the Assignor, had this sale and assignment not been made. Assignor does hereby sell, assign, transfer, and convey to Assignee, its successors, legal representatives, and assigns all claims for damages and all remedies arising out of any violation of the rights assigned hereby that may have accrued prior to the date of assignment to Assignee, or may accrue hereafter including, but not limited to, the right to sue for, collect, and retain damages for past, present and future infringement of the said Patents and Applications before or after issuance.

IN TESTIMONY WHEREOF, this Assignment is signed by the following duly authorized signatories of the Assignor and Assignee respectively, on this 26th day of August, 2020.

Assignor
Alibaba Group Holding Limited

Assignee
Advantageous New Technologies Co., Ltd.

Signature: 
Name: Min Schumann Xu
Title: Chief Patent & Technology Counsel

Signature: 
Name: J Benjamin Bai
Title: Director

Schedule A to Patent Assignment

Internal Bucket	Country / Region	App'n No.	App'n Date	Patent Title
A10036US	US	15/782,672	2017/10/12	USER IDENTITY AUTHENTICATION USING VIRTUAL REALITY
A10037US	US	15/782,747	2017/10/12	VIRTUAL REALITY IDENTITY VERIFICATION
A10135US	US	15/792,611	2017/10/24	USER LOCATION DETERMINATION BASED ON AUGMENTED REALITY
A10136US	US	15/792,628	2017/10/24	PERFORMING VIRTUAL REALITY INPUT
A10139US	US	15/794,814	2017/10/26	USER INTERFACE FOR INFORMATIONAL INPUT IN VIRTUAL REALITY ENVIRONMENT
A10141US	US	15/802,264	2017/11/2	IMPROVING THE SUCCESS RATE OF AN ONLINE TRANSACTION
A10153US	US	15/833,838	2017/12/6	TRANSPARENT RESOURCE MATCHING
A10226US	US	15/782,729	2017/10/12	SERVICE CONTROL AND USER IDENTITY AUTHENTICATION BASED ON VIRTUAL REALITY
A10337US	US	15/902,724	2018/2/22	SECURE DATA TRANSACTIONS
A10572US	US	15/845,422	2017/12/18	SECURE OFFLINE RESOURCE OPERATIONS
A10587US	US	15/837,595	2017/12/11	USER CREDIT ASSESSMENT
A10643US	US	15/819,041	2017/11/21	SERVICE CONTROL AND USER IDENTITY AUTHENTICATION BASED ON VIRTUAL REALITY
A10760US	US	15/885,234	2018/1/31	TRUSTED LOGIN OF USER ACCOUNTS
A10775US	US	15/888,617	2018/2/5	EXPRESS PACKAGE DELIVERY
A10778US	US	15/900,647	2018/2/20	HANDLING REQUESTS IN A CONSENSUS NETWORK
A10803US	US	15/864,572	2018/1/8	IMAGE RECOGNITION BASED ON AUGMENTED REALITY
A10853US	US	15/839,512	2017/12/12	ALLOCATING VIRTUAL OBJECTS BASED ON AUGMENTED REALITY
A10932US	US	15/900,617	2018/2/20	TRANSACTION VERIFICATION IN A CONSENSUS NETWORK
A10984US	US	15/893,159	2018/2/9	TWO DIMENSIONAL CODE GENERATION AND RECOGNITION
A10985US	US	15/894,761	2018/2/12	GENERATING AUTHENTICATION IMAGE TO VERIFY A TWO-DIMENSIONAL CODE OFFLINE
A11149US	US	15/874,725	2018/1/18	WORD VECTOR PROCESSING FOR FOREIGN LANGUAGES
A11226US	US	15/889,997	2018/2/6	ORDER DETERMINATION IN AN UNMANNED STORE
A11627US	US	15/992,918	2018/5/30	ENHANCING PROCESSING EFFICIENCY OF BLOCKCHAIN TECHNOLOGIES USING PARALLEL SERVICE DATA PROCESSING
A11661US	US	15/950,660	2018/4/11	IMAGE-BASED VEHICLE DAMAGE DETERMINING METHOD AND APPARATUS, AND ELECTRONIC DEVICE
A11662US	US	15/950,723	2018/4/11	PICTURE-BASED VEHICLE LOSS ASSESSMENT
A11663US	US	15/950,786	2018/4/11	IMAGE-BASED VEHICLE MAINTENANCE PLAN
A11710US	US	16/019,185	2018/6/26	MULTI-BLOCKCHAIN NETWORK DATA PROCESSING
A11825US	US	16/001,670	2018/6/6	DETERMINING USER AUTHENTICITY WITH FACE LIVENESS DETECTION
A11890US	US	16/048,573	2018/7/30	BIOMETRIC FEATURE DATABASE ESTABLISHING METHOD AND APPARATUS
A11914US	US	16/019,840	2018/6/27	WIRELESS NETWORK TYPE DETECTION METHOD AND APPARATUS, AND ELECTRONIC DEVICE
A11920US	US	16/031,306	2018/7/10	INSTANT-MESSAGING-BASED PICTURE SENDING METHOD AND DEVICE

A11924US	US	16/034,094	2018/7/12	BLOCKCHAIN BASED DATA PROCESSING METHOD AND DEVICE
A11925US	US	16/034,137	2018/7/12	BLOCKCHAIN-BASED DATA PROCESSING METHOD AND DEVICE
A11926US	US	16/034,252	2018/7/12	BLOCKCHAIN SERVICE DATA PROCESSING
A11927US	US	16/042,897	2018/7/23	BLOCKCHAIN CONSENSUS NODE SELECTION
A11928US	US	16/113,722	2018/8/27	KEY DATA PROCESSING METHOD AND APPARATUS, AND SERVER
A11929US	US	16/034,196	2018/7/12	LOGIN INFORMATION DATA PROCESSING
A11931US	US	16/045,153	2018/7/25	DIGITAL CERTIFICATE MANAGEMENT METHOD, APPARATUS, AND SYSTEM
A11932US	US	16/045,107	2018/7/25	DIGITAL CERTIFICATE MANAGEMENT METHOD AND APPARATUS, AND ELECTRONIC DEVICE
A11933US	US	16/040,347	2018/7/19	METHOD, APPARATUS, AND ELECTRONIC DEVICE FOR COMMUNICATION BETWEEN BLOCKCHAIN NODES, AND METHOD, APPARATUS, AND ELECTRONIC DEVICE FOR BLOCKCHAIN-BASED CERTIFICATE MANAGEMENT
A11934US	US	16/040,376	2018/7/19	METHOD AND APPARATUS FOR COMMUNICATION BETWEEN BLOCKCHAIN NODES
A11935US	US	16/045,132	2018/7/25	SECURE COMMUNICATIONS IN A BLOCKCHAIN NETWORK
A11975US	US	16/047,399	2018/7/27	DATA SECURITY ENHANCEMENT BY MODEL TRAINING
A12080US	US	16/003,503	2018/6/8	METHOD AND APPARATUS FOR SECURITY VERIFICATION BASED ON BIOMETRIC FEATURE
A12233US	US	16/053,606	2018/8/2	MODEL TRAINING METHOD AND APPARATUS BASED ON DATA SHARING
A12234US	US	16/002,764	2018/6/7	DETERMINING A CATEGORIZATION VALUE BASED ON PROCESSING OF ATTRIBUTE DATA
A12235US	US	16/022,194	2018/6/28	PREDICTION ALGORITHM BASED ATTRIBUTE DATA PROCESSING
A12236US	US	16/014,917	2018/6/21	SETTLEMENT METHOD, ENTRANCE CONTROL METHOD, AND APPARATUS
A12263US	US	16/124,580	2018/9/7	RESOURCE PROCESSING METHOD AND APPARATUS
A12772US	US	16/160,810	2018/10/15	DIGITAL CERTIFICATE APPLICATION
A12881US	US	16/171,715	2018/10/26	DIGITAL CERTIFICATE MANAGEMENT
A13002US	US	16/210,959	2018/12/5	SELF-SERVICE PAYMENT DEVICE AND CONTROL METHOD THEREOF
A13029US	US	16/175,503	2018/10/30	DATA STORAGE NODES COLLABORATION AND DATA PROCESSING FOR DATA STATISTICAL ANALYSIS
A13031US	US	16/152,459	2018/10/5	DYNAMICALLY-ORGANIZED SYSTEM FOR DISTRIBUTED CALCULATIONS
A13032US	US	16/167,329	2018/10/22	DATA AUDITING METHOD AND DEVICE
A13439US	US	16/197,883	2018/11/21	TWO-DIMENSIONAL CODE GENERATION AND PROCESSING
A13592DUS	US	29/650,450	2018/6/6	SMART PAYMENT SPEAKER
A13730US	US	16/235,653	2018/12/28	TRAFFIC DETECTION METHOD, DEVICE, AND SYSTEM
PCT3956US	US	15/805,205	2017/11/7	TRANSACTION SCHEME FOR OFFLINE PAYMENT
PCT4035US	US	15/694,030	2017/9/1	IDENTIFYING RISKY USER BEHAVIORS IN COMPUTER NETWORKS
PCT4263US	US	15701210	2017/9/11	STARTING NETWORK-BASED SERVICES USING A VOCAL INTERFACE WITH COMMUNICATION SOFTWARE ON A MOBILE COMPUTING DEVICE
PCT4272US	US	15/818,609	2017/11/20	EFFICIENT ACQUISITION OF A TARGET IMAGE FROM AN ORIGINAL IMAGE
PCT4319US	US	15/816,207	2017/11/17	ACCOUNT THEFT RISK IDENTIFICATION
PCT4346US	US	15/693,872	2017/9/1	REDUCING AUTHENTICATION REQUIREMENTS FOR DATA TRANSMISSIONS

PCT4350US	US	15719125	2017/9/28	EFFICIENT, TIME-BASED LEADER NODE ELECTION IN A DISTRIBUTED COMPUTING SYSTEM
PCT4402US	US	15720410	2017/9/29	RISK IDENTIFICATION BASED ON ADDRESS MATCHING
PCT4411US	US	15/703,393	2017/9/13	REDUCING COMPUTATIONAL COMPLEXITY IN THREE-DIMENSIONAL MODELING BASED ON TWO-DIMENSIONAL IMAGES
PCT4417US	US	15/833,907	2017/12/6	INFORMATION PROCESSING USING A SERVER GROUP
PCT4679US	US	15716332	2017/9/26	EFFICIENT IMAGE SYNTHESIS
PCT4682US	US	15716381	2017/9/26	EFFICIENT IMAGE SYNTHESIS USING SOURCE IMAGE MATERIALS
PCT4710US	US	15/809,780	2017/11/10	ESTABLISHING A TRUSTED LOGIN PROCEDURE
PCT4718US	US	15/844,042	2017/12/15	ELECTRONIC PAYMENT RISK PROCESSING
PCT4761US	US	15857762	2017/12/29	USING BIOMETRIC FEATURES FOR USER AUTHENTICATION
PCT4777US	US	15/809,799	2017/11/10	RISK IDENTIFICATION BASED ON HISTORICAL BEHAVIORAL DATA
PCT4786US	US	15/800,823	2017/11/1	MATCHING PRODUCTS WITH SERVICE SCENARIOS
PCT4788US	US	15/784,912	2017/10/16	MANAGING TIME CONSISTENCY IN A DISTRIBUTED COMPUTING SYSTEM
PCT4794US	US	15/797,537	2017/10/30	DISTRIBUTED DATA PROCESSING
PCT4796US	US	15717344	2017/9/27	REMOTE DATABASE SYNCHRONIZATION
PCT4803US	US	15/813,389	2017/11/15	ON-DEMAND CREATION AND ACCESS OF A VIRTUAL FILE SYSTEM
PCT4805US	US	15720434	2017/9/29	ACCURACY AND SECURITY OF DATA TRANSFER TO AN ONLINE USER ACCOUNT
PCT4833US	US	15717445	2017/9/27	RECOMMENDING A DATA HANDLING METHOD FOR A PENDING DATA HANDLING PROCESS
PCT4834US	US	15717455	2017/9/27	PRESENTING A DATA HANDLING METHOD ON A GRAPHICAL USER INTERFACE
PCT4839US	US	15/944,630	2018/4/3	ROUTER ADDRESS TYPE IDENTIFICATION METHOD AND APPARATUS
PCT4845US	US	15/838,100	2017/12/11	DETERMINING LOCATION INFORMATION BASED ON USER CHARACTERISTICS
PCT4893US	US	15/840,572	2017/12/13	ENHANCING SECURITY OF APPLICATION DOWNLOADS
PCT4917US	US	15/822,381	2017/11/27	SECURELY AND EFFICIENTLY SHARING DATA EXCHANGE RECORDS
PCT4924US	US	15/797,698	2017/10/30	RECORDING AND RESTORING A CLICK POSITION IN A WEBPAGE
PCT4926US	US	15/818,504	2017/11/20	CONTROLLING MESSAGE OUTPUT
PCT4956US	US	15/822,438	2017/11/27	ASSISTED DATA INPUT
PCT4967US	US	15857730	2017/12/29	IDENTIFICATION OF A RELATED COMPUTING DEVICE FOR AUTOMATIC ACCOUNT LOGIN
PCT5033US	US	15719274	2017/9/28	AUTHENTICATING A USER AND REGISTERING A WEARABLE DEVICE
PCT5173US	US	15/842,486	2017/12/14	RESENDING A HYPERTEXT TRANSFER PROTOCOL REQUEST
PCT5245US	US	15/835,160	2017/12/7	COMMUNICATION TOOL FOR DATA TRANSFER
PCT5253US	US	15/903,801	2018/2/23	IDENTITY AUTHENTICATION USING BIOMETRICS
PCT5420US	US	15/842,531	2017/12/14	LOGIN TO A SUSPENDED ACCOUNT
PCT5439US	US	15/834,976	2017/12/7	TRANSACTION INTERACTIONS BETWEEN NODE GROUPS
PCT5513US	US	15/920,087	2018/3/13	IDENTITY AUTHENTICATION USING A WEARABLE DEVICE
PCT5518US	US	15/836,274	2017/12/8	MITIGATING AFFAIR PROCESSING REQUESTS
PCT5551US	US	15/909,640	2018/3/1	DETERMINING DEPLOYMENT NEED FOR POINT OF INTEREST

PCT5623US	US	15/989,678	2018/5/25	PAGE JUMP METHOD AND APPARATUS
PCT5683US	US	15/926,711	2018/3/20	LOADING SUB-APPLICATIONS FOR A TERMINAL APPLICATION
PCT5696US	US	15/842,395	2017/12/14	PREVIEWING DYNAMIC IMAGES AND EXPRESSIONS
PCT5698US	US	15/835,113	2017/12/7	ENHANCING ACCURACY OF PRESENTED SEARCH KEYWORDS
PCT5759US	US	15/977,576	2018/5/11	FACE LOCATION TRACKING METHOD, APPARATUS, AND ELECTRONIC DEVICE
PCT5797US	US	15/951,928	2018/4/12	IDENTIFICATION OF NOISE SIGNAL FOR VOICE DENOISING DEVICE
PCT5814US	US	15857824	2017/12/29	COMMUNICATION TOOL FOR INITIATION OF SERVICES
PCT5829US	US	15870225	2018/1/12	QUERYING A DATABASE
PCT5830US	US	15870048	2018/1/12	VOICEPRINT RECOGNITION MODEL CONSTRUCTION
PCT5831US	US	15949338	2018/4/10	TWO-DIMENSIONAL CODE PROCESSING METHOD AND APPARATUS
PCT5841US	US	15/980,171	2018/5/15	ORDER CLUSTERING AND MALICIOUS INFORMATION COMBATING METHOD AND APPARATUS
PCT5917US	US	15/975,602	2018/5/9	IDENTIFYING POTENTIAL SOLUTIONS FOR ABNORMAL EVENTS BASED ON HISTORICAL DATA
PCT6088US	US	15/914,657	2018/3/7	METHOD AND DEVICE FOR IMPLEMENTING SERVICE FUNCTION
PCT6178US	US	15/903,995	2018/2/23	DATA STORAGE FOR MOBILE TERMINALS
PCT6222US	US	15/921,461	2018/3/14	METHOD AND APPARATUS FOR DISPLAYING FUNCTION INTERFACE
PCT6245US	US	15/949,981	2018/4/10	ADDRESS INFORMATION-BASED ACCOUNT MAPPING METHOD AND APPARATUS
PCT6250US	US	16/019,812	2018/6/27	LINK REQUEST PROCESSING METHOD AND APPARATUS
PCT6304US	US	16/027,083	2018/7/3	SECURITY VERIFICATION METHOD AND DEVICE FOR SMART CARD APPLICATION
PCT6305US	US	16/026,776	2018/7/3	DATA INTERACTION METHOD AND DEVICE, AND OFFLINE CREDIT PAYMENT METHOD AND DEVICE
PCT6309US	US	16/042,772	2018/7/23	CREDIT PAYMENT METHOD AND APPARATUS BASED ON MOBILE TERMINAL EMBEDDED SECURE ELEMENT
PCT6310US	US	16/042,808	2018/7/23	CREDIT PAYMENT METHOD AND APPARATUS BASED ON MOBILE TERMINAL PEER-TO-PEER
PCT6311US	US	16/043,417	2018/7/24	CREDIT PAYMENT METHOD AND APPARATUS BASED ON CARD EMULATION OF MOBILE TERMINAL
PCT6393US	US	16/009,310	2018/6/15	ENHANCING PERFORMANCE OF INTER-SYSTEM SERVICE OPERATIONS
PCT6494US	US	15/963,613	2018/4/26	INFORMATION SENDING METHOD AND APPARATUS
PCT6500US	US	15/976,560	2018/5/10	INFORMATION RECOMMENDATION BASED ON RULE MATCHING
PCT6508US	US	16/009,424	2018/6/15	SELECTING USER IDENTITY VERIFICATION METHODS BASED ON VERIFICATION RESULTS
PCT6513US	US	15/944,569	2018/4/3	ADDRESS ANALYSIS USING MORPHEMES
PCT6528US	US	15/968,593	2018/5/1	SERVICE PROCESSING METHOD AND APPARATUS
PCT6543US	US	16/008,999	2018/6/14	ONLINE SHOPPING SERVICE PROCESSING
PCT6548US	US	16/026,986	2018/7/3	SERVICE FALLBACK METHOD AND APPARATUS
PCT6557US	US	16/037,785	2018/7/17	DATA SYNCHRONIZATION METHOD, APPARATUS, AND SYSTEM
PCT6594US	US	15/969,364	2018/5/2	MONITORING NODE USAGE IN A DISTRIBUTED SYSTEM
PCT6603US	US	15/974,360	2018/5/8	IP ADDRESS ACQUISITION METHOD AND APPARATUS
PCT6663US	US	15/979,946	2018/5/15	WEIGHT-COEFFICIENT-BASED HYBRID INFORMATION RECOMMENDATION
PCT6668US	US	16/054,577	2018/8/3	ELECTRONIC PAYMENT SERVICE PROCESSING

PCT6673US	US	15/971,386	2018/5/4	METHOD AND DEVICE FOR APPLICATION INFORMATION RISK MANAGEMENT
PCT6681US	US	16/019,716	2018/6/27	GENERATING A GRAPHICAL USER INTERFACE BASED ON FORMATTED STRUCTURE DATA
PCT6689US	US	16/019,228	2018/6/26	SHORT LINK PROCESSING TO IMPROVE SERVICE EFFICIENCY
PCT6690US	US	16/019,897	2018/6/27	METHOD AND DEVICE FOR PROCESSING SHORT LINK, AND SHORT LINK SERVER
PCT6692US	US	16/020,038	2018/6/27	METHOD AND APPARATUS OF BARCODE-BASED MOBILE PROCESSING
PCT6700US	US	16/015,036	2018/6/21	APP PROGRAM RUNNING METHOD AND APPARATUS
PCT6823US	US	16/114,945	2018/8/28	METHOD AND APPARATUS FOR CHECKING INTEGRITY OF DISTRIBUTED SERVICE PROCESSING
PCT6850US	US	15/986,939	2018/5/23	INFORMATION GENERATION, ACQUISITION, AND PROCESSING TO IMPROVE SERVICE EFFICIENCY
PCT6982US	US	16/043,636	2018/7/24	IMAGE PROCESSING METHOD AND DEVICE
PCT6993US	US	16/027,030	2018/7/3	PAGE POSITIONING METHOD AND APPARATUS FOR ERRONEOUS INPUT INFORMATION
PCT7051US	US	16/047,648	2018/7/27	TRANSACTION CONFIRMATION BASED ON USER ATTRIBUTES
PCT7179US	US	16/031,507	2018/7/10	METHOD AND APPARATUS FOR OBTAINING ABBREVIATED NAME OF POINT OF INTEREST ON MAP
PCT7180US	US	16/131,701	2018/9/14	ANDROID-BASED POP-UP PROMPT METHOD AND DEVICE
PCT7227US	US	16/039,006	2018/7/18	SELECTIVE INFORMATION SHARING BETWEEN USERS OF A SOCIAL NETWORK
PCT7236US	US	16/015,818	2018/6/22	DISPLAYING AN ONLINE PRODUCT ON A PRODUCT SHELF
PCT7246US	US	16/026,861	2018/7/3	PERMISSION MANAGEMENT AND RESOURCE CONTROL
PCT7249US	US	16/115,204	2018/8/28	LOCATION-BASED SERVICE IMPLEMENTING METHOD AND APPARATUS
PCT7403US	US	16/137,781	2018/9/21	PAYMENT PROCESSING USING A WEARABLE DEVICE
PCT7426US	US	16/115,003	2018/8/28	INFORMATION DISPLAY METHOD AND DEVICE
PCT7505US	US	16/130,510	2018/9/13	TECHNIQUES TO VERIFY MESSAGE AUTHENTICITY
PCT7565US	US	16/140,039	2018/9/24	METHOD AND DEVICE FOR OUTPUTTING RISK INFORMATION AND CONSTRUCTING RISK INFORMATION
PCT7633US	US	16/107,027	2018/8/21	CHARACTER STRING DISTANCE CALCULATION METHOD AND DEVICE
PCT7642US	US	16/119,470	2018/8/31	AUTHORIZATION METHOD AND DEVICE FOR JOINT ACCOUNT, AND AUTHENTICATION METHOD AND DEVICE FOR JOINT ACCOUNT
PCT7665US	US	16/115,176	2018/8/28	METHOD AND APPARATUS FOR DETERMINING RELATIVE LOCATION
PCT7680US	US	15/999,081	2018/8/17	INFORMATION PROCESSING METHOD AND DEVICE FOR DISPLAYING SERVICE COMPLETION STATUS
PCT7686US	US	16/109,291	2018/8/22	WEBPAGE DATA SYNCHRONIZATION
PCT7887US	US	16/040,256	2018/7/19	METHOD AND APPARATUS FOR REALIZING COLOR TWEEN ANIMATION
PCT7909US	US	16/115,313	2018/8/28	SERVICE IMPLEMENTATION METHOD, APPARATUS, AND SYSTEM BASED ON FIX PROTOCOL
PCT7916US	US	16/119,224	2018/8/31	METHOD AND APPARATUS REUSING LISTCELL IN HYBRID APPLICATION
PCT7925US	US	16/124,999	2018/9/7	PUBLISHED INFORMATION PROCESSING METHOD AND DEVICE, AND INFORMATION PUBLISHING SYSTEM
PCT7935US	US	16/123,948	2018/9/6	RESOURCE LOADING AND A SERVICE FUNCTION FOR A SOFTWARE APPLICATION
PCT7937US	US	16/138,651	2018/9/21	METHOD AND DEVICE FOR PAGE DISPLAY

PCT7949US	US	16/028,510	2018/7/6	METHOD AND APPARATUS FOR INVOKING FUNCTION IN APPLICATION
PCT7951US	US	16/028,174	2018/7/5	INFORMATION IMAGE DISPLAY METHOD AND APPARATUS
PCT8014US	US	16/040,310	2018/7/19	SERVICE OBJECT ALLOCATION
PCT8068US	US	16/221,044	2018/12/14	INFORMATION PUSHING BASED ON USER LOCATION
PCT8120US	US	16/216,970	2018/12/11	CROSS-APPLICATION DATA SHARING
PCT8361US	US	16/225,160	2018/12/19	OFFLINE PAYMENT METHOD AND DEVICE
PCT8371US	US	16/235,770	2018/12/28	METHOD AND DEVICE FOR PROCESSING HYPERLINK OBJECT
PCT8375US	US	16/202,809	2018/11/28	METHOD AND DEVICE FOR PREVENTING SERVER FROM BEING ATTACKED
PCT8379US	US	16/205,397	2018/11/30	ADAPTIVE RESOURCE ALLOCATION METHOD AND APPARATUS
PCT8411US	US	16/200,318	2018/11/26	IDENTITY VERIFICATION METHOD AND APPARATUS
PCT8685US	US	16/184,679	2018/11/8	AUTOMATIC LOGIN METHOD AND DEVICE BETWEEN MULTIPLE WEBSITES
PCT8709US	US	16/193,282	2018/11/16	METHOD AND DEVICE FOR PROCESSING GROUP MESSAGE
PCT8710US	US	16/183,419	2018/11/7	METHOD, DEVICE, APPARATUS, AND SYSTEM FOR DISPLAYING DYNAMIC LIST
PCT8716US	US	16/183,415	2018/11/7	APPLICATION PROGRAM DATA PROCESSING METHOD AND DEVICE
PCT8721US	US	16/210,988	2018/12/5	METHOD AND DEVICE FOR PUSHING INFORMATION
PCT8835US	US	16/205,411	2018/11/30	VIDEO PLAYING CONTROL METHOD AND APPARATUS, AND VIDEO PLAYING SYSTEM
PCT8838US	US	16/212,316	2018/12/6	METHOD, DEVICE, AND TERMINAL DEVICE FOR EXTRACTING DATA
PCT8839US	US	16/193,201	2018/11/16	DATA TRANSMISSION METHOD, DATA TRANSMITTER, DATA RECEIVER, AND SYSTEM
PCT9055US	US	16/192,401	2018/11/15	IDENTITY AUTHENTICATION METHOD AND APPARATUS
PCT9060US	US	16/186,068	2018/11/9	METHOD AND SYSTEM FOR STARTING APPLICATION
PCT9061US	US	16/186,125	2018/11/9	IDENTITY VERIFICATION METHOD AND SYSTEM, AND INTELLIGENT WEARABLE DEVICE
PCT9062US	US	16/186,161	2018/11/9	METHOD AND SYSTEM FOR STARTING APPLICATION
PCT9063US	US	16/192,329	2018/11/15	METHOD, SYSTEM AND INTELLIGENT TERMINAL FOR PAIRING BETWEEN INTELLIGENT WEARABLE DEVICE AND INTELLIGENT TERMINAL
PCT9074US	US	16/186,197	2018/11/9	PROCESSING METHOD FOR PREVENTING COPY ATTACK, AND SERVER AND CLIENT
PCT9085US	US	16/205,839	2018/11/30	MOBILE PAYMENT PROCESSING
PCT9097US	US	16/210,347	2018/12/5	INFORMATION PROCESSING METHOD AND DEVICE, AND METHOD AND DEVICE FOR DISPLAYING DYNAMIC INFORMATION
PCT9100US	US	16/193,401	2018/11/16	METHOD AND DEVICE FOR DATA VERSION COMPARISON BETWEEN TRANS-TIME ZONE SITES
PCT9106US	US	16/202,609	2018/11/28	IMAGE GENERATION METHOD AND DEVICE
A9110US	US	15643963	2017/7/7	COLLECTING USER INFORMATION FROM COMPUTER SYSTEMS
PCT9111US	US	16/212,210	2018/12/6	METHOD AND DEVICE FOR IDENTITY AUTHENTICATION
PCT9114US	US	16/186,209	2018/11/9	METHOD FOR DETERMINING USER BEHAVIOR PREFERENCE, AND METHOD AND DEVICE FOR PRESENTING RECOMMENDATION INFORMATION
PCT9115US	US	16/176,766	2018/10/31	AUTHENTICATION AND GENERATION OF INFORMATION FOR AUTHENTICATION
PCT9120US	US	16/210,534	2018/12/5	PROCESSING IMAGE DATA OF A WEBPAGE
PCT9124US	US	16/227,813	2018/12/20	RESOURCE PROCESSING METHOD AND APPARATUS

PCT9234US	US	16/220,293	2018/12/14	ANIMATION GENERATION METHOD AND APPARATUS
PCT9239US	US	16/227,611	2018/12/20	STORING DATA IN DISTRIBUTED SYSTEMS
PCT9372US	US	16/234,467	2018/12/27	CONTROLLING METHOD AND DEVICE FOR SLIDER CONTROL, AND SLIDER SELECTOR
PCT9378US	US	16/234,430	2018/12/27	METHOD AND DEVICE FOR PROCESSING DATA
PCT9389US	US	16/229,810	2018/12/21	HAND DETECTION AND TRACKING METHOD AND DEVICE
A9933US	US	15792594	2017/10/24	OFFLINE-SERVICE MULTI-USER INTERACTION BASED ON AUGMENTED REALITY
A9935US	US	15720635	2017/9/29	THREE-DIMENSIONAL GRAPHICAL USER INTERFACE FOR INFORMATIONAL INPUT IN VIRTUAL REALITY ENVIRONMENT
A14433DUS	US	29/659,615	2018/8/10	COMBINED PAYMENT DEVICE AND SPEAKER
PCT6976US	US	16/119,208	2018/8/31	EFFICIENT STORAGE OF USER PERSONAL ATTRIBUTES FOR SERVICE PROVISIONING
PCT8039US	US	16/123,897	2018/9/6	SERVICE EXECUTION METHOD AND DEVICE
PCT8069US	US	16/128,277	2018/9/11	WEBSITE LOGIN METHOD AND APPARATUS
PCT8070US	US	16/137,306	2018/9/20	SERVICE PROCESSING METHOD, DEVICE, AND SYSTEM
PCT8196US	US	16/131,905	2018/9/14	MOBILE TERMINAL APPLICATION UPDATE METHOD AND DEVICE
PCT8197US	US	16/131,352	2018/9/14	RANDOM NUMBER GENERATION AND ACQUISITION METHOD AND DEVICE
PCT8365US	US	16/132,050	2018/9/14	METHOD AND DEVICE FOR LINKING TO ACCOUNT AND PROVIDING SERVICE PROCESS
PCT8368US	US	16/131,540	2018/9/14	DETERMINING ATTRIBUTE INFORMATION OF GEOGRAPHICAL LOCATIONS
PCT8374US	US	16/135,604	2018/9/19	MIXED VIEW DISPLAY METHOD AND DEVICE
PCT8388US	US	16/137,424	2018/9/20	METHOD AND DEVICE FOR CONCEALING USER INFORMATION CONTAINED IN APPLICATION
PCT8573US	US	16/134,750	2018/9/18	IDENTITY REGISTRATION METHOD AND DEVICE
PCT8608US	US	16/135,835	2018/9/19	BIOMETRIC IDENTITY REGISTRATION AND AUTHENTICATION
PCT8788US	US	16/142,851	2018/9/26	INFORMATION DISPLAY METHOD, DEVICE, AND SYSTEM
PCT9493US	US	16/240,604	2019/1/4	AUTHORITY REVOKING METHOD AND DEVICE
PCT9437US	US	16/240,549	2019/1/4	DATABASE DATA MODIFICATION REQUEST PROCESSING
PCT9528US	US	16/244,963	2019/1/10	OBJECT SELECTION METHOD AND DEVICE
PCT5831US C1	US	16/249,267	2019/1/16	TWO-DIMENSIONAL CODE PROCESSING METHOD AND APPARATUS
A14370US	US	16/251,501	2019/1/18	FUND FLOW METHOD AND APPARATUS, AND ELECTRONIC DEVICE
A14372US	US	16/251,995	2019/1/18	BLOCKCHAIN BALANCE ADJUSTMENT
A14371US	US	16/251,621	2019/1/18	FUND FLOW PROCESSING METHOD AND DEVICE
A14374US	US	16/251,648	2019/1/18	FUND FLOW REPORT GENERATION METHOD AND DEVICE
PCT9402US	US	16/251,741	2019/1/18	MODELING METHOD AND DEVICE FOR EVALUATION MODEL
A14373US	US	16/252,077	2019/1/18	REGULATORY INSPECTION IN A BLOCKCHAIN NETWORK
PCT9787US	US	16/254,284	2019/1/22	METHOD AND DEVICE FOR CONTROLLING SERVICE OPERATION RISK
PCT9381US	US	16/254,329	2019/1/22	METHOD AND DEVICE FOR PUSHING APPLICATION MESSAGE
PCT9784US	US	16/254,421	2019/1/22	IDENTIFYING HIGH RISK COMPUTING OPERATIONS
PCT9785US	US	16/254,473	2019/1/22	PROCESSING SERVICE REQUESTS BASED ON RISK IDENTIFICATION

PCT9788US	US	16/254,493	2019/1/22	TERMINAL RULE OPERATION DEVICE AND METHOD
A13674US	US	16/257,741	2019/1/25	ABNORMAL DATA DETECTION
PCT9401US	US	16/257,847	2019/1/25	AWAKENING AN APPLICATION BY MEANS OF A MOBILE BROWSER
A13673US	US	16/257,937	2019/1/25	FRAUDULENT TRANSACTION DETECTION MODEL TRAINING
A13938US	US	16/274,930	2019/2/13	VEHICLE ACCIDENT IMAGE PROCESSING METHOD AND APPARATUS
A14532US	US	16/275,444	2019/2/14	ASSET MANAGEMENT METHOD AND APPARATUS, AND ELECTRONIC DEVICE
A14530US	US	16/275,403	2019/2/14	ASSET MANAGEMENT METHOD AND APPARATUS, AND ELECTRONIC DEVICE
A14531US	US	16/275,440	2019/2/14	ASSET MANAGEMENT METHOD AND APPARATUS, AND ELECTRONIC DEVICE
A14533US	US	16/275,505	2019/2/14	ASSET MANAGEMENT METHOD AND APPARATUS, AND ELECTRONIC DEVICE
A14534US	US	16/275,811	2019/2/14	ASSET MANAGEMENT METHOD AND APPARATUS, AND ELECTRONIC DEVICE
A14535US	US	16/275,868	2019/2/14	ASSET MANAGEMENT SYSTEM, METHOD, APPARATUS, AND ELECTRONIC DEVICE
A9110US	US	15643963	2017/7/7	COLLECTING USER INFORMATION FROM COMPUTER SYSTEMS
A9491US	US	15/691,098	2017/8/30	AGGREGATING SERVICE DATA FOR TRANSMISSION AND RISK ANALYSIS
A10030US	US	15/684,603	2017/8/23	CALCULATING INDIVIDUAL CARBON FOOTPRINTS
A14536US	US	16/287,590	2019/2/27	EXECUTING TRANSACTIONS BASED ON BLOCKCHAIN
A14537US	US	16/287,750	2019/2/27	METHOD, APPARATUS, SYSTEM, AND ELECTRONIC DEVICE FOR CROSS-BLOCKCHAIN INTERACTION
A13140US	US	16/290,208	2019/3/1	RECOMMENDATION SYSTEM CONSTRUCTION METHOD AND APPARATUS
PCT15611US	US	16/293,302	2019/3/5	MANAGING SERVICES ASSOCIATED WITH URL-BASED TWO-DIMENSIONAL CODES
A14501US	US	16/295,771	2019/3/7	CONSENSUS VERIFICATION METHOD, APPARATUS, AND DEVICE
A11661USC1	US	16/358,527	2019/3/19	IMAGE-BASED VEHICLE DAMAGE DETERMINING METHOD AND APPARATUS, AND ELECTRONIC DEVICE
A11663USC1	US	16/358,581	2019/3/19	IMAGE-BASED VEHICLE MAINTENANCE PLAN
A11662USC1	US	16/358,592	2019/3/19	PICTURE-BASED VEHICLE LOSS ASSESSMENT
A10337USC1	US	16/358,607	2019/3/19	SECURE DATA TRANSACTIONS
A11627USC1	US	16/358,614	2019/3/19	ENHANCING PROCESSING EFFICIENCY OF BLOCKCHAIN TECHNOLOGIES USING PARALLEL SERVICE DATA PROCESSING
A11710USC1	US	16/358,625	2019/3/19	MULTI-BLOCKCHAIN NETWORK DATA PROCESSING
A13676US	US	16/355,439	2019/3/15	FRAUDULENT TRANSACTION IDENTIFICATION METHOD AND APPARATUS, SERVER, AND STORAGE MEDIUM
A13928US	US	16/366,794	2019/3/27	RISKY TRANSACTION IDENTIFICATION METHOD AND APPARATUS
A13944US	US	16/366,841	2019/3/27	USER CLASSIFICATION USING A DEEP FOREST NETWORK
A14874US	US	16/370,317	2019/3/29	BLOCKCHAIN-BASED SERVICE EXECUTION METHOD AND APPARATUS, AND ELECTRONIC DEVICE
A10135USC1	US	16/295,840	2019/3/7	USER LOCATION DETERMINATION BASED ON AUGMENTED REALITY
A14877US	US	16/374,195	2019/4/3	CROSS-BLOCKCHAIN AUTHENTICATION METHOD, APPARATUS, AND ELECTRONIC DEVICE
A14875US	US	16/374,273	2019/4/3	CROSS-BLOCKCHAIN INTERACTION METHOD, APPARATUS, SYSTEM, AND ELECTRONIC DEVICE

A10030USC1	US	16/355,524	2019/3/15	CALCULATING A CARBON-SAVING QUANTITY FOR AN INDIVIDUAL
A14876US	US	16/374,346	2019/4/3	CROSS-BLOCKCHAIN AUTHENTICATION METHOD AND APPARATUS, AND ELECTRONIC DEVICE
PCT9803US	US	16/380,319	2019/4/10	SECURE AUTHENTICATION USING VARIABLE IDENTIFIERS
PCT10361US	US	16/380,395	2019/4/10	METHOD AND APPARATUS FOR AUTHORIZED LOGIN
PCT9796US	US	16/381,857	2019/4/11	METHOD AND APPARATUS FOR ANTI-REPACKAGING
PCT10343US	US	16/384,592	2019/4/15	CROSS-DEVICE LOGIN TO IMPROVE SERVICE EFFICIENCY
PCT9798US	US	16/378,124	2019/4/8	METHOD AND APPARATUS FOR IMPLEMENTING ACCESSIBILITY FUNCTION IN APPLICATIONS
PCT9884US	US	16/380,609	2019/4/10	VOICE SIGNAL DETECTION METHOD AND APPARATUS
PCT10002US	US	16/378,213	2019/4/8	METHOD AND APPARATUS FOR PUSHING INFORMATION
PCT9809US	US	16/388,599	2019/4/18	Method and Apparatus for Animating Images on Mobile Devices
PCT10041US	US	16/384,539	2019/4/15	METHOD AND APPARATUS FOR SHARING REGIONAL INFORMATION
PCT10340US	US	16/384,607	2019/4/15	METHOD, APPARATUS, AND SYSTEM FOR PROCESSING TWO-DIMENSIONAL BARCODES
PCT16711US	US	16/390,042	2019/4/22	FAST COMPUTATION OF A CONVOLUTIONAL NEURAL NETWORK
PCT17191US	US	16/390,057	2019/4/22	SECRET SHARING WITH A TRUSTED INITIALIZER
PCT17492US	US	16/390,085	2019/4/22	TESTING PLATFORM FOR BLOCKCHAIN NETWORKS
PCT17516US	US	16/390,119	2019/4/22	PLATFORM FOR ATOMIC TRANSFER OF SMART ASSETS WITHIN BLOCKCHAIN NETWORKS
PCT17192US	US	16/390,147	2019/4/22	SECRET SHARING WITH NO TRUSTED INITIALIZER
PCT17193US	US	16/390,062	2019/4/22	MONITORING MULTIPLE SYSTEM INDICATORS
PCT17514US	US	16/390,088	2019/4/22	FUNCTION-AS-A-SERVICE (FAAS) PLATFORM IN BLOCKCHAIN NETWORKS
PCT17197US	US	16/390,173	2019/4/22	INTELLIGENT CUSTOMER SERVICES BASED ON A VECTOR PROPAGATION ON A CLICK GRAPH MODEL
PCT17311US	US	16/390,260	2019/4/22	BLOCKCHAIN DATA PROTECTION USING HOMOMORPHIC ENCRYPTION
PCT18627US	US	16/390,253	2019/4/22	ASYMMETRIC KEY MANAGEMENT IN CONSORTIUM BLOCKCHAIN NETWORKS
PCT17491US	US	16/390,287	2019/4/22	UTILIZING NONCE TABLE TO RESOLVE CONCURRENT BLOCKCHAIN TRANSACTION FAILURE
PCT17199US	US	16/390,199	2019/4/22	BLOCKCHAIN SYSTEM SUPPORTING PUBLIC AND PRIVATE TRANSACTIONS UNDER ACCOUNT MODELS
PCT17200US	US	16/390,375	2019/4/22	FACILITATING PRACTICAL BYZANTINE FAULT TOLERANCE BLOCKCHAIN CONSENSUS AND NODE SYNCHRONIZATION
PCT18624US	US	16/390,390	2019/4/22	CROSS-CHAIN INTERACTIONS USING A DOMAIN NAME SCHEME IN BLOCKCHAIN SYSTEMS
PCT17835US	US	16/390,446	2019/4/22	MANAGING PRIVATE TRANSACTIONS ON BLOCKCHAIN NETWORKS BASED ON WORKFLOW
PCT17485US	US	16/390,926	2019/4/22	RECOVERING ENCRYPTED TRANSACTION INFORMATION IN BLOCKCHAIN CONFIDENTIAL TRANSACTIONS
PCT10352US	US	16/393,802	2019/4/24	METHOD AND APPARATUS FOR GENERATING AND UPDATING TILES MAPS IN VIRTUAL MAPS
PCT10576US	US	16/393,839	2019/4/24	VERIFICATION CODE GENERATION TO IMPROVE RECOGNITION ACCURACY BY A PERSON AND RECOGNITION DIFFICULTY BY A COMPUTER PROGRAM
PCT9245US	US	16/394,315	2019/4/25	METHOD, SYSTEM AND APPARATUS FOR MANAGING PRIMARY AND SECONDARY DATABASES

PCT10325US	US	16/394,446	2019/4/25	METHODS AND APPARATUSES FOR IDENTITY AUTHENTICATION IN VIRTUAL REALITY
PCT9945US	US	16/395,990	2019/4/26	METHOD AND APPARATUS FOR UPGRADING APPLICATION
PCT9943US	US	16/393,648	2019/4/24	METHOD AND APPARATUS FOR BARCODE IDENTIFICATION
PCT18623US	US	16/390,494	2019/4/22	DOMAIN NAME MANAGEMENT SCHEME FOR CROSS-CHAIN INTERACTIONS IN BLOCKCHAIN SYSTEMS
PCT17833US	US	16/390,533	2019/4/22	BLOCKCHAIN DATA PROTECTION BASED ON ACCOUNT NOTE MODEL WITH ZERO-KNOWLEDGE PROOF
PCT17313US	US	16/390,626	2019/4/22	BLOCKCHAIN DATA PROTECTION USING HOMOMORPHIC ENCRYPTION
PCT17512US	US	16/390,722	2019/4/22	EXECUTING MULTI-PARTY TRANSACTIONS USING SMART CONTRACTS
PCT17513US	US	16/390,776	2019/4/22	Blockchain smart contract updates using decentralized decision
PCT17831US	US	16/390,802	2019/4/22	TRAVERSING SMART CONTRACT DATABASE THROUGH LOGIC MAP
PCT17484US	US	16/390,826	2019/4/22	REGULATING BLOCKCHAIN CONFIDENTIAL TRANSACTIONS
PCT17493US	US	16/390,873	2019/4/22	BLOCKCHAIN DATA RELATIONSHIP STRUCTURING SCHEME BASED ON BINARY LOG REPLICATION
PCT17515US	US	16/390,925	2019/4/22	PLATFORM FOR ATOMIC TRANSFER OF SMART ASSETS WITHIN BLOCKCHAIN NETWORKS
PCT17312US	US	16/390,464	2019/4/22	MANAGING COMMUNICATIONS AMONG CONSENSUS NODES AND CLIENT NODES
PCT18622US	US	16/390,586	2019/4/22	DOMAIN NAME SCHEME FOR CROSS-CHAIN INTERACTIONS IN BLOCKCHAIN SYSTEMS
PCT10156US	US	16/394,660	2019/4/25	METHODS AND DEVICES FOR BARCODE BASED COMMUNICATION AND PAYMENT IMPLEMENTATION
PCT9877US	US	16/395,961	2019/4/26	METHOD AND APPARATUS FOR SERVICE IMPLEMENTATION
A14794US	US	16/427,032	2019/5/30	BLOCKCHAIN-BASED DATA MIGRATION METHOD AND APPARATUS
A16715US	US	16/523,440	2019/7/26	BLOCKCHAIN-BASED ASSET TRANSFER METHOD AND APPARATUS, AND ELECTRONIC DEVICE
A15158US	US	16/522,294	2019/7/25	MULTI-LEVEL STORAGE METHOD AND APPARATUS FOR BLOCKCHAIN DATA
A15165US	US	16/523,018	2019/7/26	BLOCKCHAIN-BASED SERVICE RENTAL METHODS AND DEVICES
A15166US	US	16/453,866	2019/6/26	BLOCKCHAIN-BASED SMART CONTRACT INVOCATION METHOD AND APPARATUS, AND ELECTRONIC DEVICE
A15167US	US	16/453,603	2019/6/26	BLOCKCHAIN-BASED SMART CONTRACT INVOCATION METHOD AND APPARATUS, AND ELECTRONIC DEVICE
A15184US	US	16/409,333	2019/5/10	BLOCKCHAIN-BASED MUSIC ORIGINALITY ANALYSIS METHOD AND APPARATUS
A15358US	US	16/523,181	2019/7/26	BLOCKCHAIN-BASED CROSS-CHAIN DATA ACCESS METHOD AND APPARATUS
A15359US	US	16/523,383	2019/7/26	BLOCKCHAIN-BASED CROSS-CHAIN DATA OPERATION METHOD AND APPARATUS
A15360US	US	16/424,683	2019/5/29	BLOCKCHAIN-BASED TRANSACTION PROCESSING METHOD AND APPARATUS
A15361US	US	16/456,227	2019/6/28	BLOCKCHAIN-BASED SMART CONTRACT CALL METHODS AND APPARATUS, AND ELECTRONIC DEVICE
A15600US	US	16/415,337	2019/5/17	BLOCKCHAIN-BASED RESOURCE VALUE EVALUATION METHODS AND APPARATUS
A15617US	US	16/405,616	2019/5/7	BLOCKCHAIN DATA PROCESSING METHOD, APPARATUS, DEVICE, AND SYSTEM

A15618US	US	16/408,103	2019/5/9	BLOCKCHAIN DATA PROCESSING METHODS, APPARATUSES, DEVICES, AND SYSTEMS
A15619US	US	16/409,420	2019/5/10	BLOCKCHAIN DATA PROCESSING METHODS, APPARATUSES, PROCESSING DEVICES, AND SYSTEMS
A15620US	US	16/408,218	2019/5/9	BLOCKCHAIN DATA PROCESSING METHODS, APPARATUSES, PROCESSING DEVICES, AND SYSTEMS
A15621US	US	16/409,156	2019/5/10	BLOCKCHAIN MEMBER MANAGEMENT DATA PROCESSING METHODS, APPARATUSES, SERVERS, AND SYSTEMS
A15824US	US	16/424,991	2019/5/29	ASSET TRANSFER METHOD AND APPARATUS, AND ELECTRONIC DEVICE
A15825US	US	16/425,306	2019/5/29	ASSET TRANSFER METHOD AND APPARATUS, AND ELECTRONIC DEVICE
A15826US	US	16/425,381	2019/5/29	BLOCKCHAIN ASSET ISSUING AND REDEMPTION METHODS AND APPARATUSES, AND ELECTRONIC DEVICE THEREFORE
A15827US	US	16/424,750	2019/5/29	BLOCKCHAIN TRANSACTION RECONCILIATION METHOD AND APPARATUS, AND ELECTRONIC DEVICE
A15828US	US	16/425,050	2019/5/29	ASSET TRANSFER REVERSAL METHOD AND APPARATUS, AND ELECTRONIC DEVICE
A15829US	US	16/424,853	2019/5/29	BLOCKCHAIN-BASED COMMODITY CLAIM METHOD AND APPARATUS, AND ELECTRONIC DEVICE
A15830US	US	16/425,061	2019/5/29	BLOCKCHAIN-BASED MERCHANDISE TRACING METHODS AND APPARATUS
A15831US	US	16/425,195	2019/5/29	BLOCKCHAIN-BASED TRANSACTION PROCESSING METHOD AND APPARATUS, AND ELECTRONIC DEVICE
A16716US	US	16/523,312	2019/7/26	METHOD, APPARATUS AND ELECTRONIC DEVICE FOR BLOCKCHAIN-BASED ASSET ISSUANCE
PCT10471US	US	16/397,382	2019/4/29	METHOD FOR CONTROLLING DISPLAY OF SCREEN OF MOBILE TERMINAL, AND MOBILE TERMINAL
PCT10323US	US	16/397,792	2019/4/29	METHOD AND APPARATUS FOR MATCHING NAMES
PCT9954US	US	16/405,343	2019/5/7	MAP INTERFACE INTERACTION
PCT10574US	US	16/405,563	2019/5/7	METHOD AND APPARATUS FOR INFORMATION EXCHANGE
PCT10569US	US	16/563,294	2019/9/6	TRAFFIC SECTION FEE PAYMENT METHOD, FEE SYSTEM, AND PAYMENT SYSTEM
PCT10924US	US	16/562,911	2019/9/6	METHOD AND APPARATUS FOR GUIDING SERVICE FLOW
PCT11062US	US	16/421,133	2019/5/23	RISK CONTROL EVENT AUTOMATIC PROCESSING METHOD AND APPARATUS
PCT11225US	US	16/447,536	2019/6/20	VOICE FUNCTION CONTROL METHOD AND APPARATUS
PCT11227US	US	16/418,877	2019/5/21	ORDER INFORMATION DETERMINATION METHOD AND APPARATUS
PCT11389US	US	16/419,905	2019/5/22	METHOD AND APPARATUS FOR OFFLINE INTERACTION BASED ON AUGMENTED REALITY
PCT11390US	US	16/507,944	2019/7/10	VIRTUAL REALITY ENVIRONMENT-BASED IDENTITY AUTHENTICATION METHOD AND APPARATUS
PCT11433US	US	16/516,841	2019/7/19	METHODS AND DEVICES FOR BROADCASTING MESSAGES
PCT11434US	US	16/523,580	2019/7/26	METHODS AND DEVICES FOR SENDING TRANSACTION INFORMATION AND FOR CONSENSUS VERIFICATION
PCT11436US	US	16/585,407	2019/9/27	BLOCKCHAIN CONSENSUS METHOD AND DEVICE
PCT11437US	US	16/516,483	2019/7/19	MULTI-SERVER NODE SERVICE PROCESSING AND CONSENSUS METHOD AND DEVICE
PCT11438US	US	16/508,715	2019/7/11	BLOCKCHAIN-BASED DATA PROCESSING METHOD AND EQUIPMENT

PCT11439US	US	16/586,051	2019/9/27	BLOCKCHAIN-BASED DATA PROCESSING METHOD AND DEVICE
PCT11440US	US	16/585,472	2019/9/27	BLOCKCHAIN-BASED DATA STORAGE AND QUERY METHOD AND DEVICE
PCT11441US	US	16/440,782	2019/6/13	METHOD FOR VIEW SWITCHING IN A BLOCKCHAIN NETWORK
PCT11442US	US	16/502,612	2019/7/3	BLOCKCHAIN-BASED CONSENSUS METHOD AND DEVICE
PCT11443US	US	16/507,822	2019/7/10	METHOD AND DEVICE FOR PROCESSING SERVICE REQUEST
PCT11452US	US	16/598,586	2019/10/10	RESOURCE TRANSMISSION METHODS AND APPARATUS
PCT11467US	US	16/663,977	2019/10/25	SERVICE PROCESSING METHODS AND DEVICES
PCT11479US	US	16/663,009	2019/10/24	METHOD AND DEVICE FOR DETERMINING INTER-CUT TIME RANGE IN MEDIA ITEM
PCT11481US	US	16/440,834	2019/6/13	INSTANT MESSAGING GROUP MANAGEMENT METHOD AND APPARATUS
PCT11609US	US	16/593,211	2019/10/4	METHOD AND DEVICE FOR INPUTTING PASSWORD IN VIRTUAL REALITY SCENE
PCT11610US	US	16/536,041	2019/8/8	METHOD AND DEVICE FOR IN-VEHICLE PAYMENT
PCT11611US	US	16/425,364	2019/5/29	IDENTITY AUTHENTICATION METHOD, DEVICE, AND SYSTEM
PCT11618US	US	16/600,016	2019/10/11	IC CARD-BASED TRANSACTION PROCESSING AND CREDIT PAYMENT AUTHORIZATION METHOD, DEVICE, AND SYSTEM
PCT11619US	US	16/664,020	2019/10/25	SERVICE EXECUTION METHOD AND DEVICE
PCT11620US	US	16/507,896	2019/7/10	SERVICE EXECUTION METHOD AND DEVICE
PCT11621US	US	16/502,523	2019/7/3	BLOCKCHAIN SERVICE ACCEPTANCE AND CONSENSUS METHOD AND DEVICES
PCT11622US	US	16/529,873	2019/8/2	CONSENSUS VERIFICATION METHOD AND DEVICE
PCT11623US	US	16/560,520	2019/9/4	BLOCKCHAIN-BASED DATA PROCESSING METHOD AND DEVICE
PCT11624US	US	16/422,618	2019/5/24	BLOCKCHAIN-BASED DATA PROCESSING METHOD AND DEVICE
PCT11625US	US	16/561,288	2019/9/5	BLOCKCHAIN-BASED DATA PROCESSING METHOD AND DEVICE
PCT11626US	US	16/507,920	2019/7/10	BLOCKCHAIN CONSENSUS METHOD AND DEVICE
PCT11628US	US	16/665,200	2019/10/28	DATABASE STATE DETERMINING METHOD AND DEVICE, AND CONSISTENCY VERIFYING METHOD AND DEVICE
PCT9939US	US	16/418,797	2019/5/21	METHOD AND APPARATUS FOR PUBLISHING WORK IN NETWORK
PCT17832US	US	16/421,170	2019/5/23	DATA ISOLATION IN A BLOCKCHAIN NETWORK
PCT10344US	US	16/419,742	2019/5/22	METHODS, SYSTEMS, AND DEVICES FOR DISPLAYING MAPS
PCT10642US	US	16/419,842	2019/5/22	INFORMATION PRESENTATION METHOD AND APPARATUS
PCT17834US	US	16/421,260	2019/5/23	EVENT-DRIVEN BLOCKCHAIN WORKFLOW PROCESSING
PCT10174US	US	16/432,646	2019/6/5	METHOD AND DEVICE FOR IMPLEMENTING SERVICE OPERATIONS BASED ON IMAGES
PCT10371US	US	16/433,608	2019/6/6	AUTOMATICALLY DISPLAYING PAYMENT PAGES BASED ON PROXIMITY TO A PAYMENT DEVICE
PCT17152US	US	16/421,236	2019/5/23	SHARED SECRET-BASED BLOCKCHAIN STORAGE
PCT17837US	US	16/421,357	2019/5/23	VERIFYING INTEGRITY OF DATA STORED IN A CONSORTIUM BLOCKCHAIN USING A PUBLIC SIDECHAIN
PCT18164US	US	16/421,384	2019/5/23	BLOCKCHAIN TRANSACTION SPEEDS USING GLOBAL ACCELERATION NODES

PCT18162US	US	16/422,198	2019/5/24	ACCELERATING TRANSACTION DELIVERIES IN BLOCKCHAIN NETWORKS USING TRANSACTION RESENDING
PCT17823US	US	16/422,333	2019/5/24	ACHIEVING CONSENSUS AMONG NETWORK NODES IN A DISTRIBUTED SYSTEM
PCT12634US	US	16/422,765	2019/5/24	METHOD AND APPARATUS FOR VERIFYING CERTIFICATES AND IDENTITIES
PCT18606US	US	16/422,853	2019/5/24	BLOCKCHAIN DATA PROTECTION BASED ON GENERIC ACCOUNT MODEL AND HOMOMORPHIC ENCRYPTION
PCT18142US	US	16/421,922	2019/5/24	PERFORMING A RECOVERY PROCESS FOR A NETWORK NODE IN A DISTRIBUTED SYSTEM
PCT18160US	US	16/422,110	2019/5/24	SMART CONTRACT WHITELISTS
PCT17823US C1	US	16/422,472	2019/5/24	ACHIEVING CONSENSUS AMONG NETWORK NODES IN A DISTRIBUTED SYSTEM
PCT9883US	US	16/422,641	2019/5/24	METHOD, SYSTEM AND APPARATUS FOR DATA STORAGE AND DATA ACCESS
A11914USC1	US	16/422,777	2019/5/24	WIRELESS NETWORK TYPE DETECTION METHOD AND APPARATUS, AND ELECTRONIC DEVICE
PCT18628US	US	16/422,881	2019/5/24	VISUAL BLOCKCHAIN BROWSER
PCT18165US	US	16/421,395	2019/5/23	BLOCKCHAIN-BASED CROWDSOURCING OF MAP APPLICATIONS
PCT18163US	US	16/421,377	2019/5/23	ACCELERATING TRANSACTION DELIVERIES IN BLOCKCHAIN NETWORKS USING ACCELERATION NODES
PCT17836US	US	16/421,329	2019/5/23	DATA ISOLATION IN A BLOCKCHAIN NETWORK
PCT18143US	US	16/421,953	2019/5/24	PERFORMING A CHANGE OF PRIMARY NODE IN A DISTRIBUTED SYSTEM
PCT18159US	US	16/421,995	2019/5/24	PARALLEL EXECUTION OF TRANSACTIONS IN A BLOCKCHAIN NETWORK
PCT18161US	US	16/422,192	2019/5/24	PARALLEL EXECUTION OF TRANSACTIONS IN A BLOCKCHAIN NETWORK BASED ON SMART CONTRACT WHITELISTS
A9933USC1	US	16/422,798	2019/5/24	OFFLINE-SERVICE MULTI-USER INTERACTION BASED ON AUGMENTED REALITY
PCT18625US	US	16/422,868	2019/5/24	OFF-CHAIN SMART CONTRACT SERVICE BASED ON TRUSTED EXECUTION ENVIRONMENT
PCT10163US	US	16/422,689	2019/5/24	METHODS AND DEVICES FOR GENERATING SECURITY QUESTIONS AND VERIFYING IDENTITIES
PCT18605US	US	16/422,828	2019/5/24	BLOCKCHAIN DATA PROTECTION BASED ON GENERIC ACCOUNT MODEL AND HOMOMORPHIC ENCRYPTION
PCT10645US	US	16/427,087	2019/5/30	AUGMENTED-REALITY-BASED OFFLINE INTERACTION METHOD AND APPARATUS
PCT10466US	US	16/426,928	2019/5/30	PARALLEL PROCESSING OF SERVICE DATA CORRESPONDING TO MULTIPLE TARGET OBJECTS
PCT10578US	US	16/440,895	2019/6/13	METHOD AND APPARATUS FOR IDENTIFYING FALSE ADDRESS INFORMATION
PCT10575US	US	16/434,441	2019/6/7	SERVICE PROCESSING USING A DIGITAL OBJECT IDENTIFIER
PCT10469US	US	16/442,062	2019/6/14	METHOD AND APPARATUS FOR ALLOCATING VIRTUAL RESOURCES
PCT10363US	US	16/453,764	2019/6/26	METHOD, APPARATUS, USER DEVICE AND SERVER FOR DISPLAYING PERSONAL HOMEPAGE
PCT10355US	US	16/440,868	2019/6/13	METHOD AND APPARATUS FOR VERIFYING ENTITY INFORMATION
PCT10339US	US	16/441,543	2019/6/14	METHOD AND APPARATUS FOR VERIFYING BLOCK DATA IN A BLOCKCHAIN
PCT10038US	US	16/432,572	2019/6/5	METHOD, APPARATUS, AND SYSTEM FOR SERVICE DATA PROCESSING AND VERIFICATION
PCT12226US	US	16/587,977	2019/9/30	METHOD AND APPARATUS FOR ENCRYPTING DATA, METHOD AND APPARATUS FOR TRAINING MACHINE LEARNING MODEL, AND ELECTRONIC DEVICE

PCT12256US	US	16/597,459	2019/10/9	INFORMATION DISPLAY METHOD AND APPARATUS
PCT12261US	US	16/685,210	2019/11/15	PAGE METHOD AND APPARATUS
PCT12464US	US	16/698,327	2019/11/27	METHOD AND DEVICE FOR ACCOUNT CREATION, ACCOUNT REFILLING AND DATA SYNCHRONIZATION
PCT12467US	US	16/691,290	2019/11/21	ARTICLE ESTIMATION METHOD AND APPARATUS
PCT12474US	US	16/685,358	2019/11/15	METHOD AND APPARATUS FOR OFFLINE PAYMENT, SERVICE PROCESSING, AND PAYMENT PROCESSING
PCT12481US	US	16/598,686	2019/10/10	SMART BROADCASTING METHOD AND APPARATUS
PCT12487US	US	16/698,253	2019/11/27	SHORT-LINK PARSING METHODS, APPARATUS, AND DEVICES
PCT12490US	US	16/686,415	2019/11/18	IMAGE DISPLAY METHOD AND DEVICE, AND ELECTRONIC DEVICE
PCT12631US	US	16/673,199	2019/11/4	RESOURCE TRANSFER METHOD, FUND PAYMENT METHOD, AND ELECTRONIC DEVICE
PCT12755US	US	16/698,271	2019/11/27	METHOD AND APPARATUS FOR GENERATING AND IDENTIFYING IDENTIFICATION CODE
PCT17484US C1	US	16/742,612	2020/1/14	REGULATING BLOCKCHAIN CONFIDENTIAL TRANSACTIONS
PCT18607US	US	16/448,808	2019/6/21	CROSS-ASSET TRADING WITHIN BLOCKCHAIN NETWORKS
PCT19671US	US	16/448,947	2019/6/21	STRATEGY SEARCHING IN STRATEGIC INTERACTION BETWEEN PARTIES
PCT17150US	US	16/447,859	2019/6/20	A LOGISTIC REGRESSION MODELING SCHEME USING SECRETE SHARING
PCT17487US	US	16/448,739	2019/6/21	A DISTRIBUTED MULTI-PARTY SECURITY MODEL TRAINING FRAMEWORK FOR PRIVACY PROTECTION
PCT19524US	US	16/448,390	2019/6/21	SAMPLING SCHEMES FOR STRATEGY SEARCHING IN STRATEGIC INTERACTION BETWEEN PARTIES
PCT17488US	US	16/587,142	2019/9/30	PREVENTING MISREPRESENTATION OF INPUT DATA BY PARTICIPANTS IN A SECURE MULTI-PARTY COMPUTATION
PCT18144US	US	16/587,155	2019/9/30	UPDATING BLOCKCHAIN WORLD STATE MERKLE PATRICIA TRIE SUBTREE
PCT18145US	US	16/587,234	2019/9/30	DATA ISOLATION IN BLOCKCHAIN NETWORKS
PCT18147US	US	16/587,236	2019/9/30	CONSTRUCTING BLOCKCHAIN WORLD STATE MERKLE PATRICIA TRIE SUBTREE
PCT18626US	US	16/587,277	2019/9/30	PROPERTY MANAGEMENT SYSTEM UTILIZING A BLOCKCHAIN NETWORK
PCT18629US	US	16/587,371	2019/9/30	SOFTWARE INTERFACE FOR SMART CONTRACTS
PCT19665US	US	16/587,494	2019/9/30	AUTHENTICATION BASED ON A RECOVERED PUBLIC KEY
PCT19666US	US	16/587,451	2019/9/30	FIELD-PROGRAMMABLE GATE ARRAY BASED TRUSTED EXECUTION ENVIRONMENT FOR USE IN A BLOCKCHAIN NETWORK
PCT19669US	US	16/588,436	2019/9/30	PROGRAM EXECUTION AND DATA PROOF SCHEME USING MULTIPLE KEY PAIR SIGNATURES
PCT19677US	US	16/587,470	2019/9/30	RETRIEVING PUBLIC DATA FOR BLOCKCHAIN NETWORKS USING HIGHLY AVAILABLE TRUSTED EXECUTION ENVIRONMENTS
PCT19965US	US	16/587,541	2019/9/30	RETRIEVING ACCESS DATA FOR BLOCKCHAIN NETWORKS USING HIGHLY AVAILABLE TRUSTED EXECUTION ENVIRONMENTS
PCT20954US	US	16/587,901	2019/9/30	CRYPTOGRAPHY CHIP WITH IDENTITY VERIFICATION
PCT20955US	US	16/588,106	2019/9/30	CRYPTOGRAPHIC KEY MANAGEMENT BASED ON IDENTITY INFORMATION
PCT20956US	US	16/587,978	2019/9/30	MANAGING CRYPTOGRAPHIC KEYS BASED ON IDENTITY INFORMATION
PCT20957US	US	16/587,593	2019/9/30	SECURELY PERFORMING CRYPTOGRAPHIC OPERATIONS

PCT21107US	US	16/587,641	2019/9/30	MANAGING SENSITIVE DATA ELEMENTS IN A BLOCKCHAIN NETWORK
PCT21109US	US	16/587,791	2019/9/30	MANAGING HOUSING SCORES USING SMART CONTRACTS IN BLOCKCHAIN NETWORKS
PCT12785US	US	16/697,833	2019/11/27	QR Code Positioning Method and Apparatus
PCT12784US	US	16/702,829	2019/12/4	OFFLINE INFORMATION PUSHING METHOD AND APPARATUS
PCT12627US	US	16/668,857	2019/10/30	METHOD, APPARATUS, AND ELECTRONIC DEVICE FOR DETECTING MODEL SECURITY
PCT12623US	US	16/697,913	2019/11/27	METHOD AND DEVICE FOR VIRTUAL RESOURCE ALLOCATION, MODELING, AND DATA PREDICTION
PCT12462US	US	16/702,776	2019/12/4	METHOD, APPARATUS, AND DEVICE FOR PROCESSING WEB APPLICATION PACKAGE
PCT12107US	US	16/684,435	2019/11/14	AUTHENTICATION METHOD, DEVICE, VR TERMINAL, AND VR SERVER BASED ON VR SCENE
PCT11896US	US	16/692,316	2019/11/22	GOODS ORDER PROCESSING METHOD AND APPARATUS, SERVER, SHOPPING TERMINAL, AND SYSTEM
PCT19725US	US	16/671,010	2019/10/31	PROCESSING AND STORING BLOCKCHAIN DATA UNDER A TRUSTED EXECUTION ENVIRONMENT
PCT19724US	US	16/670,646	2019/10/31	PROCESSING BLOCKCHAIN DATA BASED ON SMART CONTRACT OPERATIONS EXECUTED IN A TRUSTED EXECUTION ENVIRONMENT
PCT19235US	US	16/668,945	2019/10/30	SECURE MULTI-PARTY COMPUTATION WITH NO TRUSTED INITIALIZER
PCT21106US	US	16/671,072	2019/10/31	TRANSFERRING DIGITAL TICKETS BASED ON BLOCKCHAIN NETWORKS
PCT21108US	US	16/671,076	2019/10/31	PRODUCT PROMOTION USING SMART CONTRACTS IN BLOCKCHAIN NETWORKS
PCT19186US	US	16/668,903	2019/10/30	PERFORMING PARALLEL EXECUTION OF TRANSACTIONS IN A DISTRIBUTED LEDGER SYSTEM
PCT19187US	US	16/668,937	2019/10/30	PERFORMING PARALLEL EXECUTION OF TRANSACTIONS IN A DISTRIBUTED LEDGER SYSTEM
PCT19673US	US	16/670,587	2019/10/31	PERFORMING PARALLEL EXECUTION OF TRANSACTIONS IN A DISTRIBUTED LEDGER SYSTEM
PCT19988US	US	16/671,032	2019/10/31	RETRIEVING VALUES OF DIGITAL TICKETS USING SMART CONTRACTS IN BLOCKCHAIN NETWORKS
PCT20765US	US	16/671,046	2019/10/31	DISTRIBUTED RESOURCE ALLOCATION
PCT20996US	US	16/671,061	2019/10/31	DISTRIBUTED RESOURCE ALLOCATION
PCT20997US	US	16/671,069	2019/10/31	DISTRIBUTED RESOURCE ALLOCATION
PCT19519US	US	16/670,533	2019/10/31	IDENTIFYING ENTITIES IN ELECTRONIC MEDICAL RECORDS
PCT18146US	US	16/668,812	2019/10/30	ANTI-REPLAY ATTACK AUTHENTICATION PROTOCOL
PCT19723US	US	16/670,620	2019/10/31	SECURELY EXECUTING SMART CONTRACT OPERATIONS IN A TRUSTED EXECUTION ENVIRONMENT
PCT19726US	US	16/671,024	2019/10/31	DISTRIBUTED KEY MANAGEMENT FOR TRUSTED EXECUTION ENVIRONMENTS
PCT19989US	US	16/671,055	2019/10/31	METHOD AND DEVICE FOR AVOIDING DOUBLE-SPENDING PROBLEM IN READ-WRITE SET-MODEL-BASED BLOCKCHAIN TECHNOLOGY
PCT4272US C1	US	16/570,381	2019/9/13	EFFICIENT ACQUISITION OF A TARGET IMAGE FROM AN ORIGINAL IMAGE
A15360USC1	US	16/655,989	2019/10/17	BLOCKCHAIN-BASED TRANSACTION PROCESSING METHOD AND APPARATUS
A9935USC1	US	15/678,442	2019/11/8	THREE-DIMENSIONAL GRAPHICAL USER INTERFACE FOR INFORMATIONAL INPUT IN VIRTUAL REALITY ENVIRONMENT
A10036USC1	US	16/659,008	2019/10/21	USER IDENTITY AUTHENTICATION USING VIRTUAL REALITY

PCT5759US C1	US	16/561,918	2019/9/5	FACE LOCATION TRACKING METHOD, APPARATUS, AND ELECTRONIC DEVICE
PCT4411US C1	US	16/564,342	2019/9/9	REDUCING COMPUTATIONAL COMPLEXITY IN THREE-DIMENSIONAL MODELING BASED ON TWO- DIMENSIONAL IMAGES
PCT7249US C1	US	16/579,335	2019/9/23	Location-Based Service Implementing Method and Apparatus
PCT23728US	US	16/712,506	2019/12/12	LOG-STRUCTURED STORAGE SYSTEMS
PCT23730US	US	16/712,696	2019/12/12	LOG-STRUCTURED STORAGE SYSTEMS
PCT23727US	US	16/712,323	2019/12/12	LOG-STRUCTURED STORAGE SYSTEMS
PCT23729US	US	16/712,393	2019/12/12	LOG-STRUCTURED STORAGE SYSTEMS
PCT23731US	US	16/712,440	2019/12/12	LOG-STRUCTURED STORAGE SYSTEMS
PCT23733US	US	16/712,532	2019/12/12	LOG-STRUCTURED STORAGE SYSTEMS
PCT23735US	US	16/712,785	2019/12/12	LOG-STRUCTURED STORAGE SYSTEMS
PCT23732US	US	16/712,469	2019/12/12	LOG-STRUCTURED STORAGE SYSTEMS
PCT23734US	US	16/712,436	2019/12/12	LOG-STRUCTURED STORAGE SYSTEMS
PCT23724US	US	16/712,828	2019/12/12	SHARED BLOCKCHAIN DATA STORAGE BASED ON ERROR CORRECTION CODING IN TRUSTED EXECUTION ENVIRONMENTS
PCT23725US	US	16/713,332	2019/12/13	SHARED BLOCKCHAIN DATA STORAGE BASED ON ERROR CORRECTION CODING IN TRUSTED EXECUTION ENVIRONMENTS
PCT23914US	US	16/713,574	2019/12/13	MANAGING BLOCKCHAIN-BASED CENTRALIZED LEDGER SYSTEMS
PCT23915US	US	16/713,899	2019/12/13	MANAGING BLOCKCHAIN-BASED CENTRALIZED LEDGER SYSTEMS
PCT23919US	US	16/713,841	2019/12/13	MANAGING BLOCKCHAIN-BASED CENTRALIZED LEDGER SYSTEMS
PCT23916US	US	16/713,639	2019/12/13	MANAGING BLOCKCHAIN-BASED CENTRALIZED LEDGER SYSTEMS
PCT23918US	US	16/713,966	2019/12/13	MANAGING BLOCKCHAIN-BASED CENTRALIZED LEDGER SYSTEMS
PCT23197US	US	16/712,727	2019/12/12	BLOCKCHAIN DATA STORAGE BASED ON SHARED NODES AND ERROR CORRECTION CODE
PCT23930US	US	16/713,991	2019/12/13	BLOCKCHAIN-BASED PAPERLESS DOCUMENTATION
PCT23929US	US	16/714,379	2019/12/13	BLOCKCHAIN-BASED JUDGMENT EXECUTION
PCT23931US	US	16/714,136	2019/12/13	BLOCKCHAIN-BASED DISPUTE RESOLUTION
PCT19667US	US	16/714,325	2019/12/13	INTEGRITY OF COMMUNICATIONS BETWEEN BLOCKCHAIN NETWORKS AND EXTERNAL DATA SOURCES
PCT19668US	US	16/714,414	2019/12/13	RETRIEVING PUBLIC DATA FOR BLOCKCHAIN NETWORKS USING TRUSTED EXECUTION ENVIRONMENTS
PCT19676US	US	16/714,460	2019/12/13	IMPROVING INTEGRITY OF COMMUNICATIONS BETWEEN BLOCKCHAIN NETWORKS AND EXTERNAL DATA SOURCES
PCT21692US	US	16/713,446	2019/12/13	MUTUAL AID NETWORK BASED ON SMART CONTRACT AND BLOCKCHAIN
PCT19739US	US	16/713,409	2019/12/13	ANTI-REPLAY DEVICE BASED ON MEMORY SPACE INTERCHANGE
PCT23933US	US	16/714,455	2019/12/13	BLOCKCHAIN-BASED TRUSTED PLATFORM
PCT23932US	US	16/714,378	2019/12/13	BLOCKCHAIN-BASED SERVICE OF PROCESS
PCT23064US	US	16/713,961	2019/12/13	SHARED BLOCKCHAIN DATA STORAGE BASED ON ERROR CORRECTION CODE
PCT23065US	US	16/712,702	2019/12/12	SHARED BLOCKCHAIN DATA STORAGE BASED ON ERROR CORRECTION CODE
PCT23066US	US	16/712,935	2019/12/12	SHARED BLOCKCHAIN DATA STORAGE BASED ON ERROR CORRECTION CODE

PCT22963US	US	16/714,087	2019/12/13	SHARED BLOCKCHAIN DATA STORAGE
PCT22964US	US	16/714,197	2019/12/13	SHARED BLOCKCHAIN DATA STORAGE
PCT22965US	US	16/714,484	2019/12/13	SHARED BLOCKCHAIN DATA STORAGE
PCT21729US	US	16/712,340	2019/12/12	MANAGING CYBERSECURITY VULNERABILITIES USING BLOCKCHAIN NETWORKS
PCT21738US	US	16/712,412	2019/12/12	IMPLEMENTING A BLOCKCHAIN-BASED WORKFLOW
PCT22310US	US	16/711,952	2019/12/12	IMPLEMENTING A BLOCKCHAIN-BASED WORKFLOW
PCT21693US	US	16/714,201	2019/12/13	METHOD FOR RESTORING PUBLIC KEY BASED ON SM2 SIGNATURE
PCT21703US	US	16/714,232	2019/12/13	IDENTIFYING COPYRIGHTED MATERIAL USING EMBEDDED COPYRIGHT INFORMATION
PCT21704US	US	16/713,859	2019/12/13	IDENTIFYING COPYRIGHTED MATERIAL USING EMBEDDED TIMESTAMPED COPYRIGHT INFORMATION
PCT21705US	US	16/713,819	2019/12/13	IDENTIFYING COPYRIGHTED MATERIAL USING EMBEDDED COPYRIGHT INFORMATION
PCT21706US	US	16/713,693	2018/12/13	IDENTIFYING COPYRIGHTED MATERIAL USING EMBEDDED COPYRIGHT INFORMATION
PCT21707US	US	16/713,904	2019/12/13	IDENTIFYING COPYRIGHTED MATERIAL USING EMBEDDED COPYRIGHT INFORMATION
PCT21708US	US	16/713,829	2019/12/13	IDENTIFYING COPYRIGHTED MATERIAL USING COPYRIGHT INFORMATION EMBEDDED IN TABLES
PCT21710US	US	16/713,855	2019/12/13	COPYRIGHT PROTECTION BASED ON HIDDEN COPYRIGHT INFORMATION
PCT21711US	US	16/713,920	2019/12/13	IDENTIFYING COPYRIGHTED MATERIAL USING COPYRIGHT INFORMATION EMBEDDED IN ELECTRONIC FILES
PCT21712US	US	16/714,014	2019/12/13	COPYRIGHT PROTECTION BASED ON HIDDEN COPYRIGHT INFORMATION
PCT21100US	US	16/713,428	2019/12/13	PROCESSING DATA ELEMENTS STORED IN BLOCKCHAIN NETWORKS
PCT21694US	US	16/714,351	2019/12/13	MULTI-CARD OVERLAY DISPLAY
PCT20980US	US	16/712,092	2019/12/12	DETERMINING ACTION SELECTION POLICIES OF AN EXECUTION DEVICE
PCT21753US	US	16/712,017	2019/12/12	DETERMINING ACTION SELECTION POLICIES OF AN EXECUTION DEVICE
PCT21754US	US	16/712,509	2019/12/12	DETERMINING ACTION SELECTION POLICIES OF AN EXECUTION DEVICE
PCT19922US	US	16/712,037	2019/12/12	DETERMINING ACTION SELECTION POLICIES OF AN EXECUTION DEVICE
PCT17834US C1	US	16/744,003	2020/1/15	EVENT-DRIVEN BLOCKCHAIN WORKFLOW PROCESSING
A14874USC1	US	16/752,248	2020/1/24	BLOCKCHAIN-BASED SERVICE EXECUTION METHOD AND APPARATUS, AND ELECTRONIC DEVICE
A14874USC2	US	16/752,345	2020/1/24	BLOCKCHAIN-BASED SERVICE EXECUTION METHOD AND APPARATUS, AND ELECTRONIC DEVICE
A10136USC1	US	16/697,974	2019/11/27	PERFORMING VIRTUAL REALITY INPUT
PCT10471US C1	US	16/601,344	2019/10/14	METHOD FOR CONTROLLING DISPLAY OF SCREEN OF MOBILE TERMINAL, AND MOBILE TERMINAL
A21053US	US	16/794,971	2020/2/19	METHOD, APPARATUS, AND ELECTRONIC DEVICE FOR IMPROVING PARALLEL PERFORMANCE OF CPU
A20484US	US	16/787,288	2020/2/11	BLOCKCHAIN-BASED RESOURCE ALLOCATION METHOD AND APPARATUS
A19605US	US	16/779,531	2020/1/31	DATA STORAGE APPARATUS, TRANSLATION APPARATUS, AND DATABASE ACCESS METHOD
A21665US	US	16/796,088	2020/2/20	SOLUTION FOR IMPLEMENTING COMPUTING SERVICE BASED ON STRUCTURED QUERY LANGUAGE STATEMENT
A19948US	US	16/743,971	2020/1/15	METHOD, APPARATUS, AND ELECTRONIC DEVICE FOR IMPROVING CPU PERFORMANCE
A19934US	US	16/749,345	2020/1/22	BLOCKCHAIN-BASED SERVICE PROCESSING

A19513US	US	16/703,088	2019/12/4	METHOD AND APPARATUS FOR PROCESSING VIDEO STREAM
A18110US	US	16/698,227	2019/11/27	PARTITION SPLITTING METHOD AND APPARATUS, ELECTRONIC DEVICE, AND READABLE STORAGE MEDIUM
A19229US	US	16/795,091	2020/2/19	METHOD AND APPARATUS FOR DISPLAYING PAGE TO USER THROUGH REINFORCEMENT LEARNING
A17875US	US	16/742,441	2020/1/14	FPGA HARDWARE-BASED SECURE COMPUTING METHOD AND APPARATUS
A10037USC1	US	16/593,758	2019/10/4	VIRTUAL REALITY IDENTITY VERIFICATION
PCT9883US C1	US	16/656,990	2019/10/18	METHOD, SYSTEM AND APPARATUS FOR DATA STORAGE AND DATA ACCESS
PCT10361US C1	US	16/597,521	2019/10/9	METHOD AND APPARATUS FOR AUTHORIZED LOGIN
A11149USC1	US	16/587,676	2019/9/30	WORD VECTOR PROCESSING FOR FOREIGN LANGUAGES
PCT10355US C1	US	16/693,595	2019/11/25	METHOD AND APPARATUS FOR VERIFYING ENTITY INFORMATION
A11934USC1	US	16/691,011	2019/11/21	METHOD AND APPARATUS FOR COMMUNICATION BETWEEN BLOCKCHAIN NODES
PCT13728US	US	16/810,785	2020/3/5	SMART BROADCASTING DEVICE
PCT13665US	US	16/802,147	2020/2/26	URL ATTACK DETECTION METHOD AND APPARATUS, AND ELECTRONIC DEVICE
PCT13546US	US	16/809,490	2020/3/4	WRITING AND PAYMENT FOR NFC PORTABLE DEVICES
PCT13544US	US	16/812,139	2020/3/6	AUGMENTED REALITY-BASED VIRTUAL OBJECT ALLOCATION METHOD AND APPARATUS
PCT13537US	US	16/808,704	2020/3/4	SOCIAL CONTENT RISK IDENTIFICATION
PCT13527US	US	16/812,025	2020/3/6	METHOD, APPARATUS, AND DEVICE FOR TRAINING RISK MANAGEMENT MODELS
PCT13440US	US	16/805,316	2020/2/28	VERIFICATION-BASED SERVICE AUTHORIZATION
PCT13438US	US	16/810,961	2020/3/6	METHOD AND DEVICE FOR DETERMINING DATA ANOMALY
PCT13427US	US	16/805,525	2020/2/28	RECOGNIZING CARBON-SAVING BEHAVIORS FROM IMAGES
PCT13421US	US	16/805,538	2020/2/28	GRAPHICAL STRUCTURE MODEL-BASED CREDIT RISK CONTROL
PCT13420US	US	16/809,308	2020/3/4	GRAPHICAL STRUCTURE MODEL-BASED PREVENTION AND CONTROL OF ABNORMAL ACCOUNTS
PCT13418US	US	16/812,121	2020/3/6	METHOD AND APPARATUS FOR CLASSIFYING SAMPLES
PCT13394US	US	16/810,921	2020/3/6	ARTICLE PROCESSING METHOD, TERMINAL, SYSTEM AND LPWAN GATEWAY
PCT13298US	US	16/806,693	2020/3/2	INFORMATION ALERTS METHOD, APPARATUS AND DEVICE
PCT13294US	US	16/811,976	2020/3/6	METHOD AND DEVICE FOR PUSHING INFORMATION AND METHOD AND DEVICE FOR DETERMINING DEFAULT INPUT VALUE
PCT13287US	US	16/809,391	2020/3/4	DOI DISPLAY AND TRANSACTION INFORMATION VERIFICATION
PCT13278US	US	16/810,619	2020/3/5	LOGIN METHOD AND APPARATUS AND ELECTRONIC DEVICE
PCT13271US	US	16/796,679	2020/2/20	METHOD AND DEVICE FOR HANDLING MULTI-TENANT REQUEST
PCT13265US	US	16/810,462	2020/3/5	INFORMATION TRANSMISSION METHOD AND DEVICE
PCT13150US	US	16/811,863	2020/3/6	DATA AUDITING METHOD AND DEVICE
PCT13149US	US	16/807,679	2020/3/3	PRODUCT ANTI-COUNTERFEITING VERIFICATION METHOD, APPARATUS, AND DEVICE
PCT13148US	US	16/805,446	2020/2/28	KEY MANAGEMENT

PCT13137US	US	16/805,079	2020/2/28	CLUSTER-BASED RANDOM WALK PROCESSING
PCT13136US	US	16/805,387	2020/2/28	GRAPHICAL STRUCTURE MODEL-BASED TRANSACTION RISK CONTROL
PCT12890US	US	16/805,141	2020/2/28	RISK IDENTIFICATION MODEL BUILDING AND RISK IDENTIFICATION
PCT12883US	US	16/827,536	2020/3/23	ASSESSING SHARED VEHICLE POPULARITIES
PCT12880US	US	16/806,919	2020/3/2	RECOMMENDING SHARED PRODUCTS
PCT4350US C1	US	16/737,262	2020/1/8	EFFICIENT, TIME-BASED LEADER NODE ELECTION IN A DISTRIBUTED COMPUTING SYSTEM
PCT5173US C1	US	16/735,300	2020/1/6	RESENDING A HYPERTEXT TRANSFER PROTOCOL REQUEST
PCT17197US C1	US	16/791,209	2020/2/14	INTELLIGENT CUSTOMER SERVICES BASED ON A VECTOR PROPAGATION ON A CLICK GRAPH MODEL
PCT18164US C1	US	16/707,850	2019/12/9	IMPROVING BLOCKCHAIN TRANSACTION SPEEDS USING GLOBAL ACCELERATION NODES
PCT5551US C1	US	16/720,571	2019/12/19	DETERMINING DEPLOYMENT NEED FOR POINT OF INTEREST
A10775USC1	US	16/717,440	2019/12/17	EXPRESS PACKAGE DELIVERY
A22478US	US	16/792,028	2020/2/14	MANAGING TRANSACTIONS ON BLOCKCHAIN NETWORKS
PCT5623US C1	US	16/782,274	2020/2/5	PAGE JUMP METHOD AND APPARATUS
PCT10340US C1	US	16/802,640	2020/2/27	METHOD, APPARATUS, AND SYSTEM FOR PROCESSING TWO-DIMENSIONAL BARCODES
PCT17485US C1	US	16/791,594	2020/2/14	RECOVERING ENCRYPTED TRANSACTION INFORMATION IN BLOCKCHAIN CONFIDENTIAL TRANSACTIONS
A15600USC1	US	16/780,221	2020/2/3	BLOCKCHAIN-BASED RESOURCE VALUE EVALUATION METHODS AND APPARATUS
PCT18623US C1	US	16/791,771	2020/2/14	DOMAIN NAME MANAGEMENT SCHEME FOR CROSS-CHAIN INTERACTIONS IN BLOCKCHAIN SYSTEMS
A15825USC1	US	16/739,420	2020/1/10	ASSET TRANSFER METHOD AND APPARATUS, AND ELECTRONIC DEVICE
A15619USC1	US	16/736,357	2020/1/7	BLOCKCHAIN DATA PROCESSING METHODS, APPARATUSES, PROCESSING DEVICES, AND SYSTEMS
PCT17488US C1	US	16/799,632	2020/2/24	PREVENTING MISREPRESENTATION OF INPUT DATA BY PARTICIPANTS IN A SECURE MULTI-PARTY COMPUTATION
PCT15611US C1	US	16/799,421	2020/2/24	MANAGING SERVICES ASSOCIATED WITH URL-BASED TWO-DIMENSIONAL CODES
A11928USC1	US	16/719,762	2019/12/18	KEY DATA PROCESSING METHOD AND APPARATUS, AND SERVER
A11931USC1	US	16/720,258	2019/12/19	DIGITAL CERTIFICATE MANAGEMENT METHOD, APPARATUS, AND SYSTEM
A12236USC1	US	16/721,739	2019/12/19	SETTLEMENT METHOD, ENTRANCE CONTROL METHOD, AND APPARATUS
A13029USC1	US	16/721,245	2019/12/19	DATA STORAGE NODES COLLABORATION AND DATA PROCESSING FOR DATA STATISTICAL ANALYSIS
A13032USC1	US	16/721,363	2019/12/19	DATA AUDITING METHOD AND DEVICE
A11890USC1	US	16/719,807	2019/12/18	BIOMETRIC FEATURE DATABASE ESTABLISHING METHOD AND APPARATUS
A11924USC1	US	16/721,542	2019/12/19	BLOCKCHAIN BASED DATA PROCESSING METHOD AND DEVICE
A11926USC1	US	16/720,394	2019/12/19	BLOCKCHAIN SERVICE DATA PROCESSING
A11927USC1	US	16/722,356	2019/12/20	BLOCKCHAIN CONSENSUS NODE SELECTION
A11929USC1	US	16/722,477	2019/12/20	LOGIN INFORMATION DATA PROCESSING
A11932USC1	US	16/723,057	2019/12/20	DIGITAL CERTIFICATE MANAGEMENT METHOD AND APPARATUS, AND ELECTRONIC DEVICE
A11933USC1	US	16/720,647	2019/12/19	METHOD, APPARATUS, AND ELECTRONIC DEVICE FOR COMMUNICATION BETWEEN BLOCKCHAIN

				NODES, AND METHOD, APPARATUS, AND ELECTRONIC DEVICE FOR BLOCKCHAIN-BASED CERTIFICATE MANAGEMENT
A11935USC1	US	16/722,603	2019/12/20	SECURE COMMUNICATIONS IN A BLOCKCHAIN NETWORK
A11975USC1	US	16/723,008	2019/12/20	DATA SECURITY ENHANCEMENT BY MODEL TRAINING
A12233USC1	US	16/720,931	2019/12/19	MODEL TRAINING METHOD AND APPARATUS BASED ON DATA SHARING
A12772USC1	US	16/720,522	2019/12/19	DIGITAL CERTIFICATE APPLICATION
A12881USC1	US	16/723,015	2019/12/20	DIGITAL CERTIFICATE MANAGEMENT
A13938USC1	US	16/722,919	2019/12/20	VEHICLE ACCIDENT IMAGE PROCESSING METHOD AND APPARATUS
A14370USC1	US	16/722,929	2019/12/20	FUND FLOW METHOD AND APPARATUS, AND ELECTRONIC DEVICE
A14374USC1	US	16/723,748	2019/12/20	FUND FLOW REPORT GENERATION METHOD AND DEVICE
A14530USC1	US	16/724,642	2019/12/23	ASSET MANAGEMENT METHOD AND APPARATUS, AND ELECTRONIC DEVICE
A14531USC1	US	16/725,236	2019/12/23	ASSET MANAGEMENT METHOD AND APPARATUS, AND ELECTRONIC DEVICE
A14533USC1	US	16/725,918	2019/12/23	ASSET MANAGEMENT METHOD AND APPARATUS, AND ELECTRONIC DEVICE
A14535USC1	US	16/725,686	2019/12/23	ASSET MANAGEMENT SYSTEM, METHOD, APPARATUS, AND ELECTRONIC DEVICE
A13140USC1	US	16/725,589	2019/12/23	RECOMMENDATION SYSTEM CONSTRUCTION METHOD AND APPARATUS
A13673USC1	US	16/722,899	2019/12/20	FRAUDULENT TRANSACTION DETECTION MODEL TRAINING
A13674USC1	US	16/722,946	2019/12/20	ABNORMAL DATA DETECTION
A14371USC1	US	16/725,619	2019/12/23	FUND FLOW PROCESSING METHOD AND DEVICE
A14372USC1	US	16/723,365	2019/12/20	ENHANCED BLOCKCHAIN BALANCE ADJUSTMENT OPERATION
A14373USC1	US	16/725,196	2019/12/23	REGULATORY INSPECTION IN A BLOCKCHAIN NETWORK
A14501USC1	US	16/725,266	2019/12/23	CONSENSUS VERIFICATION METHOD, APPARATUS, AND DEVICE
A14532USC1	US	16/724,785	2019/12/23	ASSET MANAGEMENT METHOD AND APPARATUS, AND ELECTRONIC DEVICE
A14534USC1	US	16/723,313	2019/12/20	ASSET MANAGEMENT METHOD AND APPARATUS, AND ELECTRONIC DEVICE
A14536USC1	US	16/723,543	2019/12/20	EXECUTING TRANSACTIONS BASED ON BLOCKCHAIN
PCT5841US C1	US	16/721,824	2019/12/19	ORDER CLUSTERING AND MALICIOUS INFORMATION COMBATING METHOD AND APPARATUS
PCT6245US C1	US	16/720,916	2019/12/19	ADDRESS INFORMATION-BASED ACCOUNT MAPPING METHOD AND APPARATUS
A14537USC1	US	16/725,715	2019/12/23	METHOD, APPARATUS, SYSTEM, AND ELECTRONIC DEVICE FOR CROSS-BLOCKCHAIN INTERACTION
PCT6310US C1	US	16/722,252	2019/12/20	CREDIT PAYMENT METHOD AND APPARATUS BASED ON MOBILE TERMINAL PEER-TO-PEER
PCT5033US C1	US	16/813,613	2020/3/9	AUTHENTICATING A USER AND REGISTERING A WEARABLE DEVICE
PCT6309US C1	US	16/720,400	2019/12/19	CREDIT PAYMENT METHOD AND APPARATUS BASED ON MOBILE TERMINAL EMBEDDED SECURE ELEMENT
PCT6543US C1	US	16/722,400	2019/12/20	ONLINE SHOPPING SERVICE PROCESSING
PCT6850US C1	US	16/720,360	2019/12/19	INFORMATION GENERATION, ACQUISITION, AND PROCESSING TO IMPROVE SERVICE EFFICIENCY
PCT7246US C1	US	16/719,819	2019/12/18	PERMISSION MANAGEMENT AND RESOURCE CONTROL

PCT7505US C1	US	16/722,166	2019/12/20	TECHNIQUES TO VERIFY MESSAGE AUTHENTICITY
PCT8365US C1	US	16/722,209	2019/12/20	METHOD AND DEVICE FOR LINKING TO ACCOUNT AND PROVIDING SERVICE PROCESS
PCT6311US C1	US	16/719,348	2019/12/18	CREDIT PAYMENT METHOD AND APPARATUS BASED ON CARD EMULATION OF MOBILE TERMINAL
PCT6500US C1	US	16/722,202	2019/12/20	INFORMATION RECOMMENDATION BASED ON RULE MATCHING
PCT6508US C1	US	16/720,337	2019/12/19	SELECTING USER IDENTITY VERIFICATION METHODS BASED ON VERIFICATION RESULTS
PCT6528US C1	US	16/721,814	2019/12/19	SERVICE PROCESSING METHOD AND APPARATUS
PCT6557US C1	US	16/719,402	2019/12/18	DATA SYNCHRONIZATION METHOD, APPARATUS, AND SYSTEM
PCT6663US C1	US	16/722,444	2019/12/20	WEIGHT-COEFFICIENT-BASED HYBRID INFORMATION RECOMMENDATION
PCT6668US C1	US	16/721,622	2019/12/19	ELECTRONIC PAYMENT SERVICE PROCESSING
PCT6982US C1	US	16/719,474	2019/12/18	IMAGE PROCESSING METHOD AND DEVICE
PCT8361US C1	US	16/724,711	2019/12/23	OFFLINE PAYMENT METHOD AND DEVICE
PCT7051US C1	US	16/719,627	2019/12/18	TRANSACTION CONFIRMATION BASED ON USER ATTRIBUTES
PCT7935US C1	US	16/723,063	2019/12/20	RESOURCE LOADING AND A SERVICE FUNCTION FOR A SOFTWARE APPLICATION
PCT7951US C1	US	16/719,836	2019/12/18	INFORMATION IMAGE DISPLAY METHOD AND APPARATUS
PCT8014US C1	US	16/719,811	2019/12/18	SERVICE OBJECT ALLOCATION
PCT8371US C1	US	16/721,092	2019/12/19	METHOD AND DEVICE FOR PROCESSING HYPERLINK OBJECT
PCT8375US C1	US	16/722,326	2019/12/20	METHOD AND DEVICE FOR PREVENTING SERVER FROM BEING ATTACKED
PCT8379US C1	US	16/724,713	2019/12/23	ADAPTIVE RESOURCE ALLOCATION METHOD AND APPARATUS
PCT8573US C1	US	16/722,284	2019/12/20	IDENTITY REGISTRATION METHOD AND DEVICE
PCT8608US C1	US	16/722,876	2019/12/20	BIOMETRIC IDENTITY REGISTRATION AND AUTHENTICATION
PCT8685US C1	US	16/722,591	2019/12/20	AUTOMATIC LOGIN METHOD AND DEVICE BETWEEN MULTIPLE WEBSITES
PCT8710US C1	US	16/721,104	2019/12/19	METHOD, DEVICE, APPARATUS, AND SYSTEM FOR DISPLAYING DYNAMIC LIST
PCT8721US C1	US	16/721,857	2019/12/19	METHOD AND DEVICE FOR PUSHING INFORMATION
PCT8839US C1	US	16/721,591	2019/12/19	DATA TRANSMISSION METHOD, DATA TRANSMITTER, DATA RECEIVER, AND SYSTEM
PCT8709US C1	US	16/724,692	2019/12/23	METHOD AND DEVICE FOR HIDING MESSAGES IN A MESSAGING GROUP
PCT9062US C1	US	16/722,211	2019/12/20	METHOD AND SYSTEM FOR STARTING APPLICATION
PCT9788US C1	US	16/725,728	2019/12/23	TERMINAL RULE OPERATION DEVICE AND METHOD
PCT9074US C1	US	16/722,832	2019/12/20	PROCESSING METHOD FOR PREVENTING COPY ATTACK, AND SERVER AND CLIENT
PCT9085US C1	US	16/725,913	2019/12/23	MOBILE PAYMENT PROCESSING
PCT9111US C1	US	16/725,922	2019/12/23	METHOD AND DEVICE FOR IDENTITY AUTHENTICATION
PCT9115US C1	US	16/721,663	2019/12/19	AUTHENTICATION AND GENERATION OF INFORMATION FOR AUTHENTICATION

PCT9061US C1	US	16/724,701	2019/12/23	IDENTITY VERIFICATION METHOD AND SYSTEM, AND INTELLIGENT WEARABLE DEVICE
PCT9100US C1	US	16/722,310	2019/12/20	METHOD AND DEVICE FOR DATA VERSION COMPARISON BETWEEN TRANS-TIME ZONE SITES
PCT9114US C1	US	16/720,416	2019/12/19	METHOD FOR DETERMINING USER BEHAVIOR PREFERENCE, AND METHOD AND DEVICE FOR PRESENTING RECOMMENDATION INFORMATION
PCT9120US C1	US	16/722,844	2019/12/20	PROCESSING IMAGE DATA OF A WEBPAGE
PCT9239US C1	US	16/722,531	2019/12/20	STORING DATA IN DISTRIBUTED SYSTEMS
PCT9372US C1	US	16/721,428	2019/12/19	CONTROLLING METHOD AND DEVICE FOR SLIDER CONTROL, AND SLIDER SELECTOR
PCT9389US C1	US	16/721,449	2019/12/19	HAND DETECTION AND TRACKING METHOD AND DEVICE
PCT9528US C1	US	16/722,559	2019/12/20	OBJECT SELECTION METHOD AND DEVICE
PCT9787US C1	US	16/725,477	2019/12/23	METHOD AND DEVICE FOR CONTROLLING SERVICE OPERATION RISK
PCT7565US C1	US	16/722,609	2019/12/20	METHOD AND DEVICE FOR OUTPUTTING RISK INFORMATION AND CONSTRUCTING RISK INFORMATION
PCT9124US C1	US	16/722,495	2019/12/20	RESOURCE PROCESSING METHOD AND APPARATUS
PCT9381US C1	US	16/723,676	2019/12/20	METHOD AND DEVICE FOR PUSHING APPLICATION MESSAGE
PCT9402US C1	US	16/723,606	2019/12/20	MODELING METHOD AND DEVICE FOR EVALUATION MODEL
PCT9437US C1	US	16/722,469	2019/12/20	DATABASE DATA MODIFICATION REQUEST PROCESSING
PCT9493US C1	US	16/723,699	2019/12/20	AUTHORITY REVOKING METHOD AND DEVICE
PCT9785US C1	US	16/725,751	2019/12/23	PROCESSING SERVICE REQUESTS BASED ON RISK IDENTIFICATION
PCT9784US C1	US	16/722,943	2019/12/20	IDENTIFYING HIGH RISK COMPUTING OPERATIONS
PCT11436US C1	US	16/736,644	2020/1/7	BLOCKCHAIN CONSENSUS METHOD AND DEVICE
PCT10575US C1	US	16/802,725	2020/2/27	SERVICE PROCESSING USING A DIGITAL OBJECT IDENTIFIER
PCT19965US C1	US	16/944,931	2020/7/31	RETRIEVING ACCESS DATA FOR BLOCKCHAIN NETWORKS USING HIGHLY AVAILABLE TRUSTED EXECUTION ENVIRONMENTS
PCT4679US C1	US	16/749,060	2020/1/22	EFFICIENT IMAGE SYNTHESIS
PCT17837US C1	US	16/780,334	2020/2/3	VERIFYING INTEGRITY OF DATA STORED IN A CONSORTIUM BLOCKCHAIN USING A PUBLIC SIDECHAIN
PCT4794US C1	US	16/800,641	2020/2/25	DISTRIBUTED DATA PROCESSING
PCT11440US C1	US	16/800,756	2020/2/25	BLOCKCHAIN-BASED DATA STORAGE AND QUERY METHOD AND DEVICE
PCT11438US C1	US	16/773,301	2020/1/27	BLOCKCHAIN-BASED DATA PROCESSING METHOD AND EQUIPMENT
A14875USC1	US	16/814,458	2020/3/10	CROSS-BLOCKCHAIN INTERACTION METHOD, APPARATUS, SYSTEM, AND ELECTRONIC DEVICE
A10985USC1	US	16/858,096	2020/4/24	GENERATING AUTHENTICATION IMAGE TO VERIFY A TWO-DIMENSIONAL CODE OFFLINE
PCT18605US C1	US	16/797,985	2020/2/21	BLOCKCHAIN DATA PROTECTION BASED ON GENERIC ACCOUNT MODEL AND HOMOMORPHIC ENCRYPTION
PCT17823US C2	US	16/800,459	2020/2/25	ACHIEVING CONSENSUS AMONG NETWORK NODES IN A DISTRIBUTED SYSTEM

PCT19956US	US	16/779,189	2020/1/31	DATA PROCESSING METHOD AND DEVICE, BLOCKCHAIN CLIENT, AND BLOCKCHAIN NODE
PCT19960US	US	16/779,073	2020/1/31	COMPUTER DATA PROCESSING METHOD AND APPARATUS FOR LARGE NUMBER OPERATIONS
PCT19967US	US	16/777,451	2020/1/30	CIPHERTEXT PREPROCESSING AND ACQUISITION
A15620USC1	US	16/750,993	2020/1/23	BLOCKCHAIN DATA PROCESSING METHODS, APPARATUSES, PROCESSING DEVICES, AND SYSTEMS
PCT19685US	US	16/778,989	2020/1/31	ENCRYPTED DATA EXCHANGE
PCT19698US	US	16/777,110	2020/1/30	MANAGING A SMART CONTRACT ON A BLOCKCHAIN
PCT19684US	US	16/776,216	2020/1/29	PROVIDING OBLIVIOUS DATA TRANSFER BETWEEN COMPUTING DEVICES
PCT20905US	US	16/779,033	2020/1/31	CHANGING A MASTER NODE IN A BLOCKCHAIN SYSTEM
PCT19955US	US	16/776,067	2020/1/29	BLOCKCHAIN-BASED DATA PROCESSING METHOD, APPARATUS, AND BLOCKCHAIN NODE
PCT20488US	US	16/776,301	2020/1/29	METHOD, APPARATUS, AND ELECTRONIC DEVICE FOR RESTORING STATE DATA OF BLOCKCHAIN
PCT20490US	US	16/775,155	2020/1/28	METHOD AND APPARATUS FOR STORING BLOCKCHAIN STATE DATA AND ELECTRONIC DEVICE
PCT19957US	US	16/777,392	2020/1/30	DATA EXCHANGE METHOD, APPARATUS, SERVER, AND ELECTRONIC DEVICE
PCT16017US	US	16/888,421	2020/5/29	BLOCKCHAIN-BASED FINANCING
PCT15836US	US	16/889,760	2020/6/1	OPEN ROAD TOLLING METHOD, APPARATUS, AND ELECTRONIC DEVICE
PCT15835US	US	16/889,681	2020/6/1	PARKING CHARGING METHOD, APPARATUS, AND ELECTRONIC DEVICE
PCT15834US	US	16/889,649	2020/6/1	NON-STOP CHARGING METHODS, APPARATUSES, AND ELECTRONIC DEVICES
PCT15833US	US	16/889,673	2020/6/1	PARKING FEE COLLECTION METHOD, APPARATUS, AND ELECTRONIC DEVICE
PCT15779US	US	16/888,350	2020/5/29	BLOCKCHAIN-BASED VIRTUAL RESOURCE DELIVERY AND CROWDFUNDING
PCT15743US	US	16/888,582	2020/5/29	NETWORK INFORMATION PROCESSING
PCT15341US	US	16/888,549	2020/5/29	CREDIT GUARANTEE-BASED SERVICE PROCESSING
PCT15187US	US	16/888,531	2020/5/29	DATA ENCRYPTION AND DECRYPTION
PCT15185US	US	16/889,607	2020/6/1	BLOCKCHAIN-BASED COPYRIGHT REVENUE ALLOCATION METHODS AND APPARATUSES
PCT15180US	US	16/888,580	2020/5/29	BLOCKCHAIN-BASED DATA VERIFICATION METHOD AND APPARATUS, AND ELECTRONIC DEVICE

PCT14588US	US	16/888,614	2020/5/29	BLOCKCHAIN-BASED DATA PROCESSING METHOD AND DEVICE
PCT14568US	US	16/888,513	2020/5/29	DISPLAYING RICH TEXT ON 3D MODELS
PCT14567US	US	16/888,475	2020/5/29	PAYMENT PROCESSING
PCT14563US	US	16/889,653	2020/6/1	METHOD AND APPARATUS FOR DATA PROCESSING IN ONLINE PAYMENT PROCESS
PCT14527US	US	16/886,609	2020/5/28	MODEL TEST METHODS AND APPARATUSES
PCT14519US	US	16/889,695	2020/6/1	GBDT MODEL FEATURE INTERPRETATION METHOD AND APPARATUS
PCT14434US	US	16/888,494	2020/5/29	PRODUCT CHECKOUT USING A CLIENT DEVICE
PCT14416US	US	16/888,526	2020/5/29	DATABASE ACCESS EXECUTION
PCT14376US	US	16/888,504	2020/5/29	FARE PAYMENT
PCT14368US	US	16/884,923	2020/5/27	AUTOMATED MULTI-CURRENCY REFUND SERVICE
PCT14342US	US	16/886,568	2020/5/28	DATA SYNCHRONIZATION METHODS, APPARATUSES, AND DEVICES
PCT14339US	US	16/888,568	2020/5/29	ARTICLE DAMAGE DETECTION
PCT14198US	US	16/886,029	2020/5/28	DISPLAYING AND RECOGNIZING TWO-DIMENSIONAL CODE
PCT14190US	US	16/888,553	2020/5/29	FILE PACKAGING AND UNPACKAGING METHODS, APPARATUSES, AND NETWORK DEVICES
PCT14189US	US	16/888,598	2020/5/29	ARTICLE DAMAGE EVALUATION
PCT14188US	US	16/888,575	2020/5/29	ABNORMAL SAMPLE PREDICTION
PCT13736US	US	16/888,573	2020/5/29	IDENTITY VERIFICATION METHODS, SYSTEMS, APPARATUSES, AND DEVICES
PCT13724US	US	16/888,541	2020/5/29	AUTOMATIC VENDING
PCT13721US	US	16/889,622	2020/6/1	ACTIVE/INACTIVE STATE DETECTION METHOD AND APPARATUS
PCT13719US	US	16/888,498	2020/5/29	SHORT-RANGE WIRELESS COMMUNICATION FOR PAYMENT ASSISTANCE
PCT13711US	US	16/888,605	2020/5/29	SORTING TEXT REPORT CATEGORIES
PCT13564US	US	16/886,450	2020/5/28	DOI SCANNING-BASED INFORMATION PROCESSING
PCT13540US	US	16/888,570	2020/5/29	BARCODE GENERATION METHODS AND APPARATUSES
PCT13539US	US	16/888,547	2020/5/29	EXECUTING APPLICATION WITHOUT UNLOCKING MOBILE DEVICE
PCT13437US	US	16/888,329	2020/5/29	BLOCKCHAIN-BASED CONTENT VERIFICATION
PCT13399US	US	16/888,560	2020/5/29	INTERACTION BEHAVIOR DETECTION METHOD, APPARATUS, SYSTEM, AND DEVICE

PCT13398US	US	16/888,491	2020/5/29	MULTI-MODAL IDENTITY RECOGNITION
PCT13264US	US	16/888,533	2020/5/29	DETERMINING TARGET USER GROUP
PCT13164US	US	16/886,235	2020/5/28	SERVICE DATA PROCESSING METHOD, APPARATUS, AND ELECTRONIC DEVICE
PCT21115US	US	16/779,250	2020/1/31	PERFORMING DATA PROCESSING BASED ON DECISION TREE
PCT21696US	US	16/776,272	2020/1/29	BLOCKCHAIN-BASED RECORDING AND QUERYING OPERATIONS
PCT21114US	US	16/779,534	2020/1/31	DATA-BASED PREDICTION RESULTS USING DECISION FORESTS
PCT21117US	US	16/779,285	2020/1/31	PERFORMING DATA PROCESSING BASED ON DECISION TREE
PCT21118US	US	16/779,231	2020/1/31	PERFORMING DATA PROCESSING BASED ON DECISION TREE
PCT21688US	US	16/779,201	2020/1/31	BLOCKCHAIN-BASED TRANSACTION VERIFICATION
PCT21699US	US	16/779,328	2020/1/31	CREATING A BLOCKCHAIN ACCOUNT AND VERIFYING BLOCKCHAIN TRANSACTIONS
PCT21709US	US	16/776,685	2020/1/30	DATA STORAGE ON TREE NODES
PCT21733US	US	16/779,239	2020/1/31	OBJECT DISTRIBUTION PROCESSING
PCT22005US	US	16/779,455	2020/1/31	UPDATING A STATE MERKLE TREE
PCT22308US	US	16/779,498	2020/1/31	PROVIDING DATA VERIFICATION IN A BLOCKCHAIN LEDGER
PCT22961US	US	16/779,482	2020/1/31	DEPLOYING A SMART CONTRACT
PCT22307US	US	16/777,735	2020/1/30	SIGNATURE VERIFICATION FOR A BLOCKCHAIN LEDGER
PCT22315US	US	16/775,945	2020/1/29	DATA TRANSMISSION METHOD AND APPARATUS IN TEE SYSTEM
PCT22320US	US	16/779,499	2020/1/31	CONFIDENTIAL TRANSACTION IN A BLOCKCHAIN NETWORK
PCT22892US	US	16/779,449	2020/1/31	BLOCKCHAIN-BASED REIMBURSEMENT SPLITTING
PCT22897US	US	16/779,198	2020/1/31	BLOCKCHAIN-BASED E-BILL NUMBER APPLICATION METHOD, APPARATUS, AND ELECTRONIC DEVICE
PCT23895US	US	16/779,228	2020/1/31	PROVIDING DATA AUTHORIZATION BASED ON BLOCKCHAIN
PCT23896US	US	16/779,488	2020/1/31	PROVIDING DATA AUTHORIZATION BASED ON BLOCKCHAIN
PCT22894US	US	16/779,173	2020/1/31	BLOCKCHAIN-BASED ELECTRONIC BILL REIMBURSEMENT METHOD, APPARATUS, AND ELECTRONIC DEVICE
PCT23897US	US	16/779,320	2020/1/31	BLOCKCHAIN-BASED DATA AUTHORIZATION METHOD AND APPARATUS

PCT19677US C1	US	16/944,115	2020/7/30	RETRIEVING PUBLIC DATA FOR BLOCKCHAIN NETWORKS USING HIGHLY AVAILABLE TRUSTED EXECUTION ENVIRONMENTS
A15829USC1	US	16/943,970	2020/7/30	BLOCKCHAIN-BASED COMMODITY CLAIM METHOD AND APPARATUS, AND ELECTRONIC DEVICE
PCT18143US C1	US	16/801,729	2020/2/26	PERFORMING A CHANGE OF PRIMARY NODE IN A DISTRIBUTED SYSTEM
A21778US	US	16/791,858	2020/2/14	METHODS AND DEVICES FOR QUANTIFYING TEXT SIMILARITY
A22025US	US	16/792,035	2020/2/14	METHOD AND SYSTEM FOR EVALUATING AN OBJECT DETECTION MODEL
A21785US	US	16/791,936	2020/2/14	AUTOMATIC OPTICAL CHARACTER RECOGNITION (OCR) CORRECTION
PCT19961US	US	16/790,596	2020/2/13	BLOCKCHAIN-BASED HIERARCHICAL DATA STORAGE
PCT10343US C1	US	16/789,913	2020/2/13	CROSS-DEVICE LOGIN TO IMPROVE SERVICE EFFICIENCY
PCT19682US	US	16/786,481	2020/2/10	TRANSACTION PROCESSING IN A SERVICE BLOCKCHAIN
PCT19534US	US	16/786,337	2020/2/10	LOSS FUNCTION VALUE DETERMINATION METHOD AND DEVICE AND ELECTRONIC EQUIPMENT
PCT19962US	US	16/790,599	2020/2/13	BLOCKCHAIN BASED HIERARCHICAL DATA STORAGE
PCT20903US	US	16/785,319	2020/2/7	OBTAINING BLOCKCHAIN DATA IN STAGES
PCT21701US	US	16/786,794	2020/2/10	BLOCKCHAIN-BASED DATA COMPRESSION AND SEARCHING
PCT22000US	US	16/786,949	2020/2/10	SENDING CROSS-CHAIN AUTHENTICATABLE MESSAGES
PCT19964US	US	16/790,605	2020/2/13	BLOCKCHAIN-BASED HIERARCHICAL DATA STORAGE
PCT21063US	US	16/785,451	2020/2/7	TRANSFERRING METHOD AND SYSTEM BASED ON BLOCKCHAIN SMART CONTRACT
PCT20487US	US	16/786,502	2020/2/10	BLOCKCHAIN-BASED LEASING
PCT20489US	US	16/786,713	2020/2/10	PROCESSING LEDGER TRANSACTIONS IN A BLOCKCHAIN
PCT21057US	US	16/785,371	2020/2/7	BLOCKCHAIN-BASED PAYMENT
PCT22001US	US	16/786,437	2020/2/10	SENDING CROSS-CHAIN AUTHENTICATABLE MESSAGES
PCT20740US	US	16/783,862	2020/2/6	ALLOCATING VIRTUAL RESOURCE BASED ON BLOCK CHAIN
PCT22002US	US	16/786,807	2020/2/10	SENDING CROSS-CHAIN AUTHENTICATABLE MESSAGES

PCT22011US	US	16/815,615	2020/3/11	RING SIGNATURE-BASED ANONYMOUS TRANSACTION
PCT24349US	US	16/786,856	2020/2/10	METHOD AND APPARATUS FOR INTERPRETING BYTECODE INSTRUCTION STREAM
PCT24161US	US	16/813,524	2020/3/9	METHOD AND APPARATUS FOR PERFORMING MULTI-PARTY SECURE COMPUTING BASED-ON ISSUING CERTIFICATE
PCT23955US	US	16/813,516	2020/3/9	BLOCKCHAIN TRANSACTION PROCESSING METHOD AND APPARATUS
PCT23954US	US	16/813,634	2020/3/9	BLOCKCHAIN TRANSACTION PROCESSING METHOD AND APPARATUS
PCT23953US	US	16/816,983	2020/3/12	BLOCKCHAIN TRANSACTION QUERY METHOD AND SYSTEM
PCT23927US	US	16/812,036	2020/3/6	DATA STORAGE IN BLOCKCHAIN-TYPE LEDGER
PCT23865US	US	16/813,627	2020/3/9	METHOD AND APPARATUS FOR PROCESSING USER INTERACTION SEQUENCE DATA
PCT23685US	US	16/807,237	2020/3/3	CREATING INDEX IN BLOCKCHAIN-TYPE LEDGER
PCT23681US	US	16/815,906	2020/3/11	METHOD, APPARATUS, AND DEVICE FOR STORING OPERATION RECORD BASED ON TRUSTED EXECUTION ENVIRONMENT
PCT23677US	US	16/806,937	2020/3/2	MULTI-THREAD PROCESSING
PCT23608US	US	16/782,938	2020/2/5	BLOCKCHAIN-BASED TEXT SIMILARITY DETECTION METHOD, APPARATUS AND ELECTRONIC DEVICE
PCT23598US	US	16/785,403	2020/2/7	METHOD AND APPARATUS FOR MULTITHREADED DATA TRANSMISSION IN A TEE SYSTEM
PCT23597US	US	16/785,328	2020/2/7	METHOD AND APPARATUS FOR MULTITHREADED DATA TRANSMISSION IN A TEE SYSTEM
PCT23596US	US	16/785,312	2020/2/7	METHOD AND APPARATUS FOR DATA TRANSMISSION IN A TEE SYSTEM
PCT23593US	US	16/788,247	2020/2/11	TRANSACTION SCHEDULING METHOD AND APPARATUS
PCT23538US	US	16/815,596	2020/3/11	PROVIDING HIGH AVAILABILITY COMPUTING SERVICE BY ISSUING A CERTIFICATE
PCT23442US	US	16/812,093	2020/3/6	RFID INFORMATION PROCESSING
PCT23438US	US	16/786,764	2020/2/10	CROSS-BLOCKCHAIN RESOURCE TRANSMISSION

PCT23437US	US	16/783,112	2020/2/5	METHOD AND APPARATUS FOR INTER-BLOCKCHAIN TRANSMISSION OF AUTHENTICABLE MESSAGE
PCT23435US	US	16/805,649	2020/2/28	BLOCKCHAIN AUTHORIZATION
PCT23433US	US	16/803,388	2020/2/27	BLOCKCHAIN USER ACCOUNT DATA
PCT23212US	US	16/804,732	2020/2/28	GEOGRAPHIC LOCATION-BASED MULTIMEDIA INFORMATION DISPLAY
PCT23193US	US	16/783,102	2020/2/5	HOMOMORPHIC DATA ENCRYPTION METHOD AND APPARATUS FOR IMPLEMENTING PRIVACY PROTECTION
PCT23184US	US	16/815,539	2020/3/11	BLOCKCHAIN-TYPE DATA STORAGE
PCT23176US	US	16/818,898	2020/3/13	LANGUAGE PROCESSING USING A NEURAL NETWORK
PCT23163US	US	16/804,660	2020/2/28	SECURE ACCOUNT MODIFICATION
PCT23067US	US	16/805,269	2020/2/28	IDENTITY IDENTIFICATION AND PREPROCESSING
PCT23063US	US	16/812,205	2020/3/6	FOOD ORDERING CONSOLE AND FOOD ORDERING DEVICE
PCT23061US	US	16/812,159	2020/3/6	ELECTRONIC PAYMENT DEVICE
PCT22984US	US	16/803,237	2020/2/27	BLOCKCHAIN LEDGER AUTHENTICATION
PCT22983US	US	16/804,680	2020/2/28	BLOCKCHAIN LEDGER COMPRESSION
PCT22982US	US	16/811,502	2020/3/6	SERVICE IDENTIFIER-BASED DATA INDEXING
PCT22981US	US	16/809,251	2020/3/4	VERIFYING A BLOCKCHAIN-TYPE LEDGER
PCT22980US	US	16/810,691	2020/3/5	DATA STORAGE METHOD, APPARATUS, AND DEVICE FOR MULTI-LAYER BLOCKCHAIN-TYPE LEDGER
PCT22979US	US	16/806,875	2020/3/2	BLOCKCHAIN-TYPE DATA STORAGE
PCT22962US	US	16/792,070	2020/2/14	SECRET SHARING DATA EXCHANGE FOR GENERATING A DATA PROCESSING MODEL
PCT22960US	US	16/787,151	2020/2/11	GENERATION OF A MODEL PARAMETER
PCT22953US	US	16/810,934	2020/3/6	IDENTITY VERIFICATION
PCT22941US	US	16/802,226	2020/2/26	USER CLASSIFICATION
PCT22940US	US	16/805,025	2020/2/28	SELECTING AN AUTHENTICATION SYSTEM FOR HANDLING AN AUTHENTICATION REQUEST
PCT22919US	US	16/779,524	2020/1/31	DETERMINING DATA PROCESSING MODEL PARAMETERS THROUGH MULTIPARTY COOPERATION
PCT22915US	US	16/815,917	2020/3/11	VIRTUAL RESOURCE ALLOCATION METHOD AND DEVICE BASED ON BLOCKCHAIN
PCT22909US	US	16/803,449	2020/2/27	METHOD AND DEVICE FOR DIVIDING STORAGE DEVICES INTO DEVICE GROUPS
PCT22908US	US	16/803,469	2020/2/27	BLOCKCHAIN DATA STORAGE METHOD AND APPARATUS

PCT22903US	US	16/803,330	2020/2/27	DATA MANIPULATION RECORD STORAGE METHOD, SYSTEM, APPARATUS, AND DEVICE
PCT22902US	US	16/803,289	2020/2/27	TIME AUTHENTICATION METHOD, APPARATUS AND DEVICE IN BLOCKCHAIN-TYPE LEDGER
PCT22898US	US	16/783,094	2020/2/5	BLOCKCHAIN-BASED BILL NUMBER ALLOCATION METHOD, APPARATUS AND ELECTRONIC DEVICE
PCT22896US	US	16/783,075	2020/2/5	BLOCKCHAIN-BASED BILL WRITE-OFF METHOD, APPARATUS, ELECTRONIC DEVICE, AND STORAGE MEDIUM
PCT22895US	US	16/783,098	2020/2/5	BLOCKCHAIN-BASED ELECTRONIC BILL CANCELLATION METHOD, APPARATUS, AND ELECTRONIC DEVICE
PCT22893US	US	16/779,511	2020/1/31	OBTAINING A BLOCKCHAIN-BASED, REAL-NAME, ELECTRONIC BILL
PCT22662US	US	16/809,856	2020/3/5	IDENTIFICATION PREPROCESSING
PCT22617US	US	16/818,927	2020/3/13	EXTENDING QUESTION AND ANSWER SAMPLES
PCT22499US	US	16/802,973	2020/2/27	RECOMMENDING TARGET TRANSACTION CODE SETTING REGION
PCT22495US	US	16/808,002	2020/3/3	PREDICTING FUTURE USER TRANSACTIONS
PCT22491US	US	16/808,208	2020/3/3	SEGMENTATION-BASED DAMAGE DETECTION
PCT22486US	US	16/813,355	2020/3/9	RECOGNIZING DAMAGE THROUGH IMAGE ANALYSIS
PCT22485US	US	16/814,842	2020/3/10	GENERATING RECOMMENDATION INFORMATION
PCT22476US	US	16/792,031	2020/2/14	DETERMINING MODEL PARAMETERS USING SECRET SHARING
PCT22346US	US	16/803,510	2020/2/27	BLOCKCHAIN-BASED ACCOUNT MANAGEMENT
PCT22322US	US	16/805,641	2020/2/28	BLOCKCHAIN-BASED DATA PROCESSING
PCT22312US	US	16/805,179	2020/2/28	BLOCKCHAIN TRANSACTIONS WITH RING SIGNATURES
PCT22306US	US	16/790,628	2020/2/13	STORING AN ASSET UPDATE RECORD
PCT22026US	US	16/815,896	2020/3/11	SPLIT-TYPE CODE READING APPARATUS
PCT22010US	US	16/808,217	2020/3/3	BLOCKCHAIN-BASED INFORMATION PROCESSING METHOD, APPARATUS AND DEVICE
PCT21992US	US	16/806,956	2020/3/2	VIDEO OBJECT PROCESSING
PCT21990US	US	16/815,907	2020/3/11	CERTIFICATE APPLICATION OPERATIONS
PCT21983US	US	16/812,211	2020/3/6	MONITORING TIME CERTIFICATE GENERATION REQUESTS
PCT21982US	US	16/815,902	2020/3/11	DATA VERIFICATION METHOD, APPARATUS, AND SYSTEM AND DEVICE

PCT21981US	US	16/815,893	2020/3/11	DATA STORAGE METHOD, APPARATUS, SYSTEM AND DEVICE
PCT21980US	US	16/815,882	2020/3/11	LEDGER VERIFICATION METHOD AND APPARATUS, AND DEVICE
PCT21969US	US	16/810,683	2020/3/5	PAYMENT PROOF GENERATION METHOD AND SYSTEM, AND DEVICE
PCT21968US	US	16/814,824	2020/3/10	METHOD, SYSTEM, AND DEVICE FOR OBTAINING BANK CARD SIGNING INFORMATION ELEMENT
PCT21955US	US	16/802,655	2020/2/27	LOADING MODELS ON NODES HAVING MULTIPLE MODEL SERVICE FRAMEWORKS
PCT21912US	US	16/811,966	2020/3/6	IDENTITY VERIFICATION
PCT21906US	US	16/810,772	2020/3/5	SECURE SMART UNLOCKING
PCT21905US	US	16/806,959	2020/3/2	FACIAL DATA COLLECTION AND VERIFICATION
PCT21900US	US	16/809,809	2020/3/5	SCANNING INTERFACE DISPLAY
PCT21858US	US	16/804,635	2020/2/28	DETECTING FRAUDULENT FACIAL RECOGNITION
PCT21847US	US	16/804,335	2020/2/28	NEAR FIELD COMMUNICATION DEVICE AND INFORMATION PROCESSING METHOD
PCT21846US	US	16/813,210	2020/3/9	RESOURCE TRANSFER OPERATIONS
PCT21798US	US	16/805,331	2020/2/28	BLOCKCHAIN-BASED TRANSACTION PROCESSING
PCT21759US	US	16/816,719	2020/3/12	PROCESSING SEQUENTIAL INTERACTION DATA
PCT21747US	US	16/812,105	2020/3/6	DETERMINING COMPUTER-EXECUTED ENSEMBLE MODEL
PCT21690US	US	16/814,848	2020/3/10	SERVICE EXECUTION RESULT OBTAINING METHOD AND SYSTEM BASED ON BLOCKCHAIN
PCT21687US	US	16/803,262	2020/2/27	BLOCKCHAIN-BASED COPYRIGHT DISTRIBUTION
PCT21680US	US	16/801,998	2020/2/26	OBTAINING STABLE FRAMES
PCT21678US	US	16/809,256	2020/3/4	TWO-DIMENSIONAL CODE IDENTIFICATION AND POSITIONING
PCT21677US	US	16/803,317	2020/2/27	TRAFFIC DETERMINATION
PCT21647US	US	16/802,189	2020/2/26	SERVICE RECOMMENDATION
PCT21620US	US	16/809,273	2020/3/4	DATA TRANSMISSION AND NETWORK INTERFACE CONTROLLER
PCT21608US	US	16/818,887	2020/3/13	DATA TRANSCEIVING OPERATIONS AND DEVICES
PCT21606US	US	16/811,590	2020/3/6	CASCADE CACHE REFRESHING
PCT21184US	US	16/810,670	2020/3/5	SELF-SERVICE CHECKOUT COUNTER CHECKOUT
PCT21182US	US	16/816,503	2020/3/12	SELF-SERVICE CHECKOUT COUNTER
PCT21166US	US	16/809,224	2020/3/4	DATA PROCESSING METHOD, APPARATUS, MEDIUM AND DEVICE

PCT21165US	US	16/802,780	2020/2/27	DATA ENCAPSULATION CONVERSION AND TRANSMISSION
PCT21164US	US	16/803,830	2020/2/27	USER IDENTITY VERIFICATION
PCT21150US	US	16/809,219	2020/3/4	OBTAINING DYNAMIC EMBEDDING VECTORS OF NODES IN RELATIONSHIP GRAPHS
PCT21131US	US	16/805,531	2020/2/28	MONITORING VIDEO BROADCASTS
PCT21130US	US	16/877,235	2020/5/18	PROCESSING ACCOUNT TRANSFER REQUESTS
PCT21069US	US	16/803,807	2020/2/27	BLOCKCHAIN AUTHORIZATION INFORMATION GENERATION
PCT21049US	US	16/818,476	2020/3/13	UPDATING AND QUERYING A BITMAP INDEX
PCT21046US	US	16/805,320	2020/2/28	MANAGEMENT CLIENT AND DEVICE MONITORING
PCT20995US	US	16/805,530	2020/2/28	IMAGE RECOGNITION AND AUTHENTICATION
PCT20994US	US	16/807,914	2020/3/3	CERTIFICATE VERIFICATION
PCT20972US	US	16/803,007	2020/2/27	PAYMENT CHANNEL RECOMMENDATION
PCT20907US	US	16/805,162	2020/2/28	BLOCKCHAIN-BASED VIRTUAL RESOURCE ALLOCATION
PCT20900US	US	16/811,542	2020/3/6	NETWORK CONFIGURATION USING MULTICAST ADDRESS MODULATION
PCT20895US	US	16/804,669	2020/2/28	DATA STORING AND SHARING USING TWO-DIMENSIONAL CODES
PCT20737US	US	16/810,653	2020/3/5	BLOCKCHAIN-BASED INVOICE CREATION METHOD APPARATUS, AND ELECTRONIC DEVICE
PCT20734US	US	16/803,955	2020/2/27	BLOCKCHAIN-BASED SERVICE SOURCE TRACING METHOD, APPARATUS, AND ELECTRONIC DEVICE
PCT20732US	US	16/803,720	2020/2/27	BLOCKCHAIN-BASED SETTLEMENT METHOD, APPARATUS, AND ELECTRONIC DEVICE
PCT20499US	US	16/802,905	2020/2/27	BLOCKCHAIN-BASED PAYMENT WITHHOLDING AND AGREEMENT SIGNING METHOD, APPARATUS, AND ELECTRONIC DEVICE
PCT20493US	US	16/801,329	2020/2/26	BLOCKCHAIN-BASED WITHHOLDING OPERATIONS
PCT20491US	US	16/775,195	2020/1/28	BLOCK CHAIN STATE DATA SYNCHRONIZATION METHOD, APPARATUS, AND ELECTRONIC DEVICE
PCT20476US	US	16/804,433	2020/2/28	FACIAL RECOGNITION PAYMENT
PCT19951US	US	16/804,775	2020/2/28	STORAGE AND EXECUTION OF SMART CONTRACTS IN BLOCKCHAINS
PCT19920US	US	16/803,150	2020/2/27	TRANSACTION FEATURE GENERATION
PCT19713US	US	16/850,792	2020/4/16	OPTIMIZATION PROCESSING FOR NEURAL NETWORK MODEL
PCT19195US	US	16/801,953	2020/2/26	DETERMINING GENERATION TIME FOR BLOCKCHAIN DATA
PCT21999US	US	16/811,469	2020/3/6	CONFIDENTIAL BLOCKCHAIN TRANSACTIONS
PCT9954US C1	US	16/914,065	2020/6/26	MAP INTERFACE INTERACTION
PCT11439US C1	US	16/796,105	2020/2/20	BLOCKCHAIN-BASED DATA PROCESSING METHOD AND DEVICE
PCT23918US C1	US	16/829,866	2020/3/25	MANAGING BLOCKCHAIN-BASED CENTRALIZED LEDGER SYSTEMS
PCT17514US C1	US	16/834,559	2020/3/30	FUNCTION-AS-A-SERVICE (FAAS) PLATFORM IN BLOCKCHAIN NETWORKS

PCT11433US C1	US	16/917,393	2020/6/30	METHODS AND DEVICES FOR BROADCASTING MESSAGES
PCT11442US C1	US	16/806,917	2020/3/2	BLOCKCHAIN-BASED CONSENSUS METHOD AND DEVICE
A10030USC2	US	16/824,459	2020/3/19	CALCULATING INDIVIDUAL CARBON FOOTPRINTS
PCT18163US C1	US	16/837,736	2020/4/1	ACCELERATING TRANSACTION DELIVERIES IN BLOCKCHAIN NETWORKS USING ACCELERATION NODES
PCT17487US C1	US	16/852,177	2020/4/17	A DISTRIBUTED MULTI-PARTY SECURITY MODEL TRAINING FRAMEWORK FOR PRIVACY PROTECTION
PCT19682US C1	US	16/870,503	2020/5/8	TRANSACTION PROCESSING IN A SERVICE BLOCKCHAIN
PCT23897US C1	US	16/779,052	2020/1/31	BLOCKCHAIN-BASED DATA AUTHORIZATION METHOD AND APPARATUS
PCT21063US C1	US	16/938,042	2020/7/24	TRANSFERRING OPERATIONS BASED ON BLOCKCHAIN SMART CONTRACT
PCT21115US C1	US	16/890,626	2020/6/2	PERFORMING DATA PROCESSING BASED ON DECISION TREE
PCT21117US C1	US	16/890,850	2020/6/2	PERFORMING DATA PROCESSING BASED ON DECISION TREE
PCT21118US C1	US	16/945,780	2020/7/31	PERFORMING DATA PROCESSING BASED ON DECISION TREE
PCT21696US C1	US	16/945,670	2020/7/31	BLOCKCHAIN-BASED RECORDING AND QUERYING OPERATIONS
PCT22307US C1	US	16/945,677	2020/7/31	SIGNATURE VERIFICATION FOR A BLOCKCHAIN LEDGER
PCT22961US C1	US	16/944,122	2020/7/30	DEPLOYING A SMART CONTRACT
A13928USC1	US	16/802,627	2020/2/27	RISKY TRANSACTION IDENTIFICATION METHOD AND APPARATUS
PCT6689US C1	US	16/833,021	2020/3/27	SHORT LINK PROCESSING TO IMPROVE SERVICE EFFICIENCY
PCT17832US C1	US	16/805,492	2020/2/28	DATA ISOLATION IN A BLOCKCHAIN NETWORK
PCT10339US C1	US	16/660,412	2019/10/22	METHOD AND APPARATUS FOR VERIFYING BLOCK DATA IN A BLOCKCHAIN
PCT12465US	US	16/697,882	2019/11/27	SMART BROADCAST DEVICE
PCT7887US C1	US	16/673,621	2019/11/4	METHOD AND APPARATUS FOR REALIZING COLOR TWEEN ANIMATION
PCT10352US C1	US	16/852,147	2020/4/17	METHOD AND APPARATUS FOR GENERATING AND UPDATING TILES MAPS IN VIRTUAL MAPS
A21772US	US	16/791,749	2020/2/14	System And Method For Training Neural Networks
PCT8069US C1	US	16/897,412	2020/6/10	WEBSITE LOGIN METHOD AND APPARATUS
PCT23062US	US	16/813,619	2020/3/9	ELECTRONIC PAYMENT DEVICE
PCT5513US C1	US	16/822,467	2020/3/18	IDENTITY AUTHENTICATION USING A WEARABLE DEVICE
PCT7180US C1	US	16/820,543	2020/3/16	ANDROID-BASED POP-UP PROMPT METHOD AND DEVICE
A14794USC1	US	16/869,298	2020/5/7	BLOCKCHAIN-BASED DATA MIGRATION METHOD AND APPARATUS
PCT4761US C1	US	16/876,584	2020/5/18	USING BIOMETRIC FEATURES FOR USER AUTHENTICATION
PCT23064US C1	US	16/852,212	2020/4/17	SHARED BLOCKCHAIN DATA STORAGE BASED ON ERROR CORRECTION CODE
PCT20765US C1	US	16/904,903	2020/6/18	DISTRIBUTED RESOURCE ALLOCATION
PCT10344US C1	US	16/904,071	2020/6/17	METHODS, SYSTEMS, AND DEVICES FOR DISPLAYING MAPS
PCT23437US C1	US	16/945,326	2020/7/31	METHOD AND APPARATUS FOR INTER-BLOCKCHAIN TRANSMISSION OF AUTHENTICABLE MESSAGE

PCT23596US C1	US	16/915,585	2020/6/29	METHOD AND APPARATUS FOR DATA TRANSMISSION IN A TEE SYSTEM
PCT23597US C1	US	16/944,866	2020/7/31	METHOD AND APPARATUS FOR MULTITHREADED DATA TRANSMISSION IN A TEE SYSTEM
PCT23916US C1	US	16/925,985	2020/7/10	MANAGING BLOCKCHAIN-BASED CENTRALIZED LEDGER SYSTEMS
PCT23914US C2	US	16/944,129	2020/7/30	MANAGING BLOCKCHAIN-BASED CENTRALIZED LEDGER SYSTEMS
PCT23914US C1	US	16/944,126	2020/7/30	MANAGING BLOCKCHAIN-BASED CENTRALIZED LEDGER SYSTEMS
A28151US	US	16/448,995	2019/6/21	SPOOF DETECTION BY ESTIMATING SUBJECT MOTION FROM CAPTURED IMAGE FRAMES
A28149US	US	16/370,691	2019/3/29	SPOOF DETECTION VIA 3D RECONSTRUCTION
A28147US	US	16/447,762	2019/6/20	AUTHENTICATION BY TRANSMITTING INFORMATION THROUGH MAGNETIC FIELDS
A28152US	US	16/182,372	2018/11/6	CAPTURING IMAGES UNDER CODED ILLUMINATION PATTERNS TO REDUCE EFFECTS OF AMBIENT LIGHTING CONDITIONS
A28148US	US	16/447,802	2019/6/20	VALIDATING TRANSACTIONS USING INFORMATION TRANSMITTED THROUGH MAGNETIC FIELDS
A28146US	US	16/368,508	2019/3/28	SPOOF DETECTION USING VIBRATION RESPONSE
A28145US	US	16/368,385	2019/3/28	SPECULAR REFLECTION REDUCTION USING POLARIZED LIGHT SOURCES
A28144US	US	16/361,453	2019/3/22	FUSING MULTI-SPECTRAL IMAGES FOR IDENTITY AUTHENTICATION
A28142US	US	16/370,575	2019/3/29	BIOMETRIC IDENTIFICATION USING COMPOSITE HAND IMAGES
A28143US	US	16/361,078	2019/3/21	SPOOF DETECTION USING OPTOKINETIC RESPONSE
PCT18624US C1	US	16/879,117	2020/5/20	CROSS-CHAIN INTERACTIONS USING A DOMAIN NAME SCHEME IN BLOCKCHAIN SYSTEMS
PCT8788US C1	US	16/882,847	2020/5/26	INFORMATION DISPLAY METHOD, DEVICE, AND SYSTEM
PCT19673US C1	US	16/945,696	2020/7/31	PERFORMING PARALLEL EXECUTION OF TRANSACTIONS IN A DISTRIBUTED LEDGER SYSTEM
PCT20955US C1	US	16/945,341	2020/7/31	CRYPTOGRAPHIC KEY MANAGEMENT BASED ON IDENTITY INFORMATION
PCT19726US C1	US	16/893,122	2020/6/4	DISTRIBUTED KEY MANAGEMENT FOR TRUSTED EXECUTION ENVIRONMENTS
A13730USC1	US	16/881,213	2020/5/22	TRAFFIC DETECTION METHOD, DEVICE, AND SYSTEM
PCT10355US C2	US	16/895,778	2020/6/8	METHOD AND APPARATUS FOR VERIFYING ENTITY INFORMATION
PCT11437US C1	US	16/882,057	2020/5/22	MULTI-SERVER NODE SERVICE PROCESSING AND CONSENSUS METHOD AND DEVICE
PCT20997US C1	US	16/915,627	2020/6/29	DISTRIBUTED RESOURCE ALLOCATION
A18110USC1	US	16/899,251	2020/6/11	PARTITION SPLITTING METHOD AND APPARATUS, ELECTRONIC DEVICE, AND READABLE STORAGE MEDIUM
A15166USC1	US	16/934,737	2020/7/21	BLOCKCHAIN-BASED SMART CONTRACT INVOCATION METHOD AND APPARATUS, AND ELECTRONIC DEVICE
PCT19725US C1	US	16/902,864	2020/6/16	PROCESSING AND STORING BLOCKCHAIN DATA UNDER A TRUSTED EXECUTION ENVIRONMENT
PCT20994US C1	US	16/945,778	2020/7/31	CERTIFICATE VERIFICATION
PCT22984US C1	US	16/945,707	2020/7/31	BLOCKCHAIN LEDGER AUTHENTICATION
PCT11610US C1	US	16/912,236	2020/6/25	METHOD AND DEVICE FOR IN-VEHICLE PAYMENT
PCT5759US C2	US	16/925,072	2020/7/9	FACE LOCATION TRACKING METHOD, APPARATUS, AND ELECTRONIC DEVICE

A10853USC1	US	16/903,993	2020/6/17	ALLOCATING VIRTUAL OBJECTS BASED ON AUGMENTED REALITY
A13439USC1	US	16/915,658	2020/6/29	TWO-DIMENSIONAL CODE GENERATION AND PROCESSING
PCT5173US C2	US	16/894,445	2020/6/5	RESENDING A HYPERTEXT TRANSFER PROTOCOL REQUEST
PCT21847US C1	US	16/915,639	2020/6/29	NEAR FIELD COMMUNICATION DEVICE AND INFORMATION PROCESSING METHOD
PCT16696US	US	UNFILED	UNFILED	BENEFIT ALLOCATION METHOD, APPARATUS, AND ELECTRONIC DEVICE
A28139US	US	16/256,371	2019/1/24	SYSTEMS AND METHODS FOR DEEP-LEARNING BASED SUPER-RESOLUTION USING MULTIPLE DEGRADATIONS ON-DEMAND LEARNING
A28141US	US	16/361,038	2019/3/21	AUTHENTICATION VERIFICATION USING SOFT BIOMETRIC TRAITS
A28136US	US	16/269,059	2019/2/6	SPOOF DETECTION USING DUAL-BAND NEAR-INFRARED (NIR) IMAGING
A28135US	US	16/172,601	2018/10/26	SPOOF DETECTION USING MULTIPLE IMAGE ACQUISITION DEVICES
A28134US	US	16/171,029	2018/10/25	SPOOF DETECTION USING STRUCTURED LIGHT ILLUMINATION
A28140US	US	16/370,525	2019/3/29	USING AN ILLUMINATION SEQUENCE PATTERN FOR BIOMETRIC AUTHENTICATION
A28131US	US	16/355,374	2019/3/15	SPOOF DETECTION BY COMPARING IMAGES CAPTURED USING VISIBLE-RANGE AND INFRARED (IR) ILLUMINATIONS
A28127US	US	16/353,876	2019/3/14	AUTHENTICATION BY TRANSMITTING INFORMATION THROUGH A HUMAN BODY
A28138US	US	16/247,450	2019/1/14	METHODS FOR DEEP-LEARNING BASED SUPER-RESOLUTION USING HIGH-FREQUENCY LOSS
A28117US	US	16/183,274	2018/11/7	NEURAL NETWORKS FOR BIOMETRIC RECOGNITION
A28116US	US	16/520,839	2019/7/24	SPOOF DETECTION BY GENERATING 3D POINT CLOUDS FROM CAPTURED IMAGE FRAMES
A28133US	US	16/172,546	2018/10/26	SPOOF DETECTION USING IRIS IMAGES
A28132US	US	16/172,447	2018/10/26	CAPTURING IMAGES USING SUB-FRAME ILLUMINATION
A28130US	US	16/224,479	2018/12/18	CREATING AN IRIS IDENTIFIER TO REDUCE SEARCH SPACE OF A BIOMETRIC SYSTEM
A28129US	US	16/281,935	2019/2/21	AUTHENTICATION OF A USER BASED ON ANALYZING TOUCH INTERACTIONS WITH A DEVICE
A28128US	US	16/250,873	2019/1/17	CAPACITIVE THROUGH-BODY COMMUNICATION
A28126US	US	16/216,862	2018/12/11	AUTHENTICATION BASED ON CORRELATION OF MULTIPLE PULSE SIGNALS
A28124US	US	16/241,508	2019/1/7	PASSIVE IDENTIFICATION OF A KIOSK USER
A28120US	US	16/250,795	2019/1/17	IDENTITY AUTHENTICATION USING LENS FEATURES
A28119US	US	16/370,467	2019/3/29	SYNCHRONIZING AN ILLUMINATION SEQUENCE OF ILLUMINATION SOURCES WITH IMAGE CAPTURE IN ROLLING SHUTTER MODE
A28125US	US	16/216,811	2018/12/11	AUTHENTICATION USING SOUND BASED MONITOR DETECTION
A28123US	US	16/140,746	2018/9/25	REDUCTION OF SEARCH SPACE IN BIOMETRIC AUTHENTICATION SYSTEMS
A28121US	US	16/160,881	2018/10/15	EMPLOYING PRESSURE SIGNATURES FOR PERSONAL IDENTIFICATION
A28114US	US	16/154,263	2018/10/8	PASSIVE AFFECTIVE AND KNOWLEDGE-BASED AUTHENTICATION THROUGH EYE MOVEMENT TRACKING
A28113US	US	16/154,244	2018/10/8	DYNAMIC GRIP SIGNATURE FOR PERSONAL AUTHENTICATION
A28122US	US	16/212,516	2018/12/6	HIGH DEFINITION, LARGE CAPTURE VOLUME, CAMERA ARRAY SYSTEM

A28115US	US	16/024,106	2018/6/29	ONE CLICK APPLICATION ASSET DISTRIBUTION
PCT11481US C1	US	16/901,959	2020/6/15	INSTANT MESSAGING GROUP MANAGEMENT METHOD AND APPARATUS
PCT13438US C1	US	16/911,078	2020/6/24	METHOD AND DEVICE FOR DETERMINING DATA ANOMALY
PCT18163US C2	US	16/945,235	2020/7/31	ACCELERATING TRANSACTION DELIVERIES IN BLOCKCHAIN NETWORKS USING ACCELERATION NODES
PCT22964US C1	US	16/928,794	2020/7/14	SHARED BLOCKCHAIN DATA STORAGE
PCT12490US C1	US	16/945,713	2020/7/31	IMAGE DISPLAY METHOD AND DEVICE, AND ELECTRONIC DEVICE
PCT11626US C1	US	16/921,212	2020/7/6	BLOCKCHAIN CONSENSUS METHOD AND DEVICE
A11710USC2	US	16/901,585	2020/6/15	MULTI-BLOCKCHAIN NETWORK DATA PROCESSING
PCT23193US C1	US	16/945,434	2020/7/31	HOMOMORPHIC DATA ENCRYPTION METHOD AND APPARATUS FOR IMPLEMENTING PRIVACY PROTECTION
PCT18147US C1	US	16/908,502	2020/6/22	CONSTRUCTING BLOCKCHAIN WORLD STATE MERKLE PATRICIA TRIE SUBTREE
PCT23197US C1	US	16/945,302	2020/7/31	BLOCKCHAIN DATA STORAGE BASED ON SHARED NODES AND ERROR CORRECTION CODE
PCT5830US C1	US	16/906,829	2020/6/19	VOICEPRINT RECOGNITION MODEL CONSTRUCTION
PCT22983US C1	US	16/944,111	2020/7/30	BLOCKCHAIN LEDGER COMPRESSION
PCT8197US C1	US	16/906,840	2020/6/19	RANDOM NUMBER GENERATION AND ACQUISITION METHOD AND DEVICE
PCT18606US C1	US	16/945,533	2020/7/31	BLOCKCHAIN DATA PROTECTION BASED ON GENERIC ACCOUNT MODEL AND HOMOMORPHIC ENCRYPTION
PCT21955US C1	US	16/939,740	2020/7/27	LOADING MODELS ON NODES HAVING MULTIPLE MODEL SERVICE FRAMEWORKS
A14535USC2	US	16/908,430	2020/6/22	ASSET MANAGEMENT SYSTEM, METHOD, APPARATUS, AND ELECTRONIC DEVICE
PCT12474US C1	US	16/906,862	2020/6/19	METHOD AND APPARATUS FOR OFFLINE PAYMENT, SERVICE PROCESSING, AND PAYMENT PROCESSING
PCT23725US C1	US	16/917,426	2020/6/30	SHARED BLOCKCHAIN DATA STORAGE BASED ON ERROR CORRECTION CODING IN TRUSTED EXECUTION ENVIRONMENTS
PCT19957US C1	US	16/942,549	2020/7/29	DATA EXCHANGE FOR MULTI-PARTY COMPUTATION
PCT10575US C2	US	16/945,184	2020/7/31	SERVICE PROCESSING USING A DIGITAL OBJECT IDENTIFIER
PCT21100US C1	US	16/945,296	2020/7/31	PROCESSING DATA ELEMENTS STORED IN BLOCKCHAIN NETWORKS
PCT19187US C1	US	16/945,749	2020/7/31	PERFORMING PARALLEL EXECUTION OF TRANSACTIONS IN A DISTRIBUTED LEDGER SYSTEM
PCT23919US C1	US	16/925,123	2020/7/9	MANAGING BLOCKCHAIN-BASED CENTRALIZED LEDGER SYSTEMS
PCT21693US C1	US	16/945,004	2020/7/31	METHOD FOR RESTORING PUBLIC KEY BASED ON SM2 SIGNATURE
PCT11611US C1	US	16/945,362	2020/7/31	IDENTITY AUTHENTICATION METHOD, DEVICE, AND SYSTEM
PCT19669US C1	US	16/933,629	2020/7/20	PROGRAM EXECUTION AND DATA PROOF SCHEME USING MULTIPLE KEY PAIR SIGNATURES
PCT21707US C1	US	16/945,757	2020/7/31	IDENTIFYING COPYRIGHTED MATERIAL USING EMBEDDED COPYRIGHT INFORMATION
PCT23685US C1	US	16/945,593	2020/7/31	CREATING INDEX IN BLOCKCHAIN-TYPE LEDGER
PCT23435US C1	US	16/945,772	2020/7/31	BLOCKCHAIN AUTHORIZATION

PCT21711US C1	US	16/945,316	2020/7/31	IDENTIFYING COPYRIGHTED MATERIAL USING COPYRIGHT INFORMATION EMBEDDED IN ELECTRONIC FILES
PCT12623US C1	US	16/907,637	2020/6/22	METHOD AND DEVICE FOR VIRTUAL RESOURCE ALLOCATION, MODELING, AND DATA PREDICTION
A14535USC3	US	16/908,490	2020/6/22	ASSET MANAGEMENT SYSTEM, METHOD, APPARATUS, AND ELECTRONIC DEVICE
PCT4710US C1	US	16/884,966	2020/5/27	ESTABLISHING A TRUSTED LOGIN PROCEDURE
PCT7916US C1	US	16/904,031	2020/6/17	METHOD AND APPARATUS REUSING LISTCELL IN HYBRID APPLICATION
A11920USC1	US	16/908,369	2020/6/22	INSTANT-MESSAGING-BASED PICTURE SENDING METHOD AND DEVICE
PCT12785US C1	US	16/908,967	2020/6/23	QR Code Positioning Method and Apparatus
PCT9060US C1	US	16/913,863	2020/6/26	METHOD AND SYSTEM FOR STARTING APPLICATION
PCT22303US	US	16/885,958	2020/5/28	INDEX CREATION FOR DATA RECORDS
PCT22890US	US	16/888,471	2020/5/29	BLOCKCHAIN-BASED STATE MACHINE MAINTENANCE
PCT23067US C1	US	16/945,759	2020/7/31	IDENTITY IDENTIFICATION AND PREPROCESSING
A28113USC1	US	16/793,909	2020/2/18	DYNAMIC GRIP SIGNATURE FOR PERSONAL AUTHENTICATION
A28119USC1	US	16/797,954	2020/2/21	SYNCHRONIZING AN ILLUMINATION SEQUENCE OF ILLUMINATION SOURCES WITH IMAGE CAPTURE IN ROLLING SHUTTER MODE
A28121USC1	US	16/735,333	2020/1/6	EMPLOYING PRESSURE SIGNATURES FOR PERSONAL IDENTIFICATION
A28115USC1	US	16/780,284	2020/2/3	ONE CLICK APPLICATION ASSET DISTRIBUTION
A28152USC1	US	16/795,464	2020/2/19	CAPTURING IMAGES UNDER CODED ILLUMINATION PATTERNS TO REDUCE EFFECTS OF AMBIENT LIGHTING CONDITIONS
A28123USC1	US	16/796,529	2020/2/20	REDUCTION OF SEARCH SPACE IN BIOMETRIC AUTHENTICATION SYSTEMS
A28140USC1	US	16/795,148	2020/2/19	USING AN ILLUMINATION SEQUENCE PATTERN FOR BIOMETRIC AUTHENTICATION
A28141USC1	US	16/796,595	2020/2/20	AUTHENTICATION VERIFICATION USING SOFT BIOMETRIC TRAITS
A28145USC1	US	16/795,271	2020/2/19	SPECULAR REFLECTION REDUCTION USING POLARIZED LIGHT SOURCES
A28147USC1	US	15/930,260	2020/5/12	AUTHENTICATION BY TRANSMITTING INFORMATION THROUGH MAGNETIC FIELDS
A28148USC1	US	16/795,224	2020/2/19	VALIDATING TRANSACTIONS USING INFORMATION TRANSMITTED THROUGH MAGNETIC FIELDS
A28147USC2	US	15/930,269	2020/5/12	AUTHENTICATION BY TRANSMITTING INFORMATION THROUGH MAGNETIC FIELDS
PCT22026U USC1	US	16/945,447	2020/7/31	SPLIT-TYPE CODE READING APPARATUS
PCT4967US C1	US	16/945,764	2020/7/31	IDENTIFICATION OF A RELATED COMPUTING DEVICE FOR AUTOMATIC ACCOUNT LOGIN
PCT18162US C1	US	16/945,396	2020/7/31	ACCELERATING TRANSACTION DELIVERIES IN BLOCKCHAIN NETWORKS USING TRANSACTION RESENDING
PCT21705US C1	US	16/944,119	2020/7/30	IDENTIFYING COPYRIGHTED MATERIAL USING EMBEDDED COPYRIGHT INFORMATION
PCT10924US C1	US	16/945,688	2020/7/31	METHOD AND APPARATUS FOR SERVICE DIVERSION IN CONNECTION WITH MOBILE PAYMENT TRANSACTIONS
PCT21710US C1	US	16/945,662	2020/7/31	COPYRIGHT PROTECTION BASED ON HIDDEN COPYRIGHT INFORMATION
PCT23184US C1	US	16/945,128	2020/7/31	BLOCKCHAIN-TYPE DATA STORAGE

PCT21999US C1	US	16/945,157	2020/7/31	CONFIDENTIAL BLOCKCHAIN TRANSACTIONS
PCT22491US C1	US	16/945,774	2020/7/31	SEGMENTATION-BASED DAMAGE DETECTION
PCT10156US C1	US	16/921,275	2020/7/6	METHODS AND DEVICES FOR BARCODE BASED COMMUNICATION AND PAYMENT IMPLEMENTATION
PCT23929US C1	US	16/921,546	2020/7/6	BLOCKCHAIN-BASED JUDGMENT EXECUTION
A22025USC1	US	16/944,985	2020/7/31	METHOD AND SYSTEM FOR EVALUATING AN OBJECT DETECTION MODEL
PCT11225US C1	US	16/820,098	2020/3/16	VOICE FUNCTION CONTROL METHOD AND APPARATUS
PCT21906US C1	US	16/945,591	2020/7/31	SECURE SMART UNLOCKING
PCT12465US C1	US	16/945,551	2020/7/31	SMART BROADCAST DEVICE
PCT11436US C2	US	16/945,267	2020/7/31	BLOCKCHAIN CONSENSUS METHOD AND DEVICE
PCT9100US C2	US	16/945,767	2020/7/31	METHOD AND DEVICE FOR DATA VERSION COMPARISON BETWEEN TRANS-TIME ZONE SITES
PCT21620US C1	US	16/945,621	2020/7/31	DATA TRANSMISSION AND NETWORK INTERFACE CONTROLLER
PCT11896US C1	US	16/945,650	2020/7/31	GOODS ORDER PROCESSING METHOD AND APPARATUS, SERVER, SHOPPING TERMINAL, AND SYSTEM
PCT7236US C1	US	16/941,098	2020/7/28	DISPLAYING AN ONLINE PRODUCT ON A PRODUCT SHELF
A13031USC1	US	16/945,655	2020/7/31	DYNAMICALLY-ORGANIZED SYSTEM FOR DISTRIBUTED CALCULATIONS
PCT21712US C1	US	16/945,683	2020/7/31	COPYRIGHT PROTECTION BASED ON HIDDEN COPYRIGHT INFORMATION
PCT11609US C1	US	16/843,001	2020/4/8	METHOD AND DEVICE FOR INPUTTING PASSWORD IN VIRTUAL REALITY SCENE
PCT11609US C2	US	16/944,916	2020/7/31	METHOD AND DEVICE FOR INPUTTING PASSWORD IN VIRTUAL REALITY SCENE
A21053USC1	US	16/945,589	2020/7/31	METHOD, APPARATUS, AND ELECTRONIC DEVICE FOR IMPROVING PARALLEL PERFORMANCE OF CPU
A10803USC1	US	16/841,467	2020/4/6	IMAGE RECOGNITION BASED ON AUGMENTED REALITY
PCT23184US C2	US	16/945,162	2020/7/31	BLOCKCHAIN-TYPE DATA STORAGE
PCT23437US C2	US	16/945,425	2020/7/31	METHOD AND APPARATUS FOR INTER-BLOCKCHAIN TRANSMISSION OF AUTHENTICABLE MESSAGE
PCT10575US C3	US	16/945,488	2020/7/31	SERVICE PROCESSING USING A DIGITAL OBJECT IDENTIFIER
PCT10041US C1	US	16/872,022	2020/5/11	METHOD AND APPARATUS FOR SHARING REGIONAL INFORMATION
PCT21057US C1	US	16/938,042	2020/7/24	TRANSFERRING OPERATIONS BASED ON BLOCKCHAIN SMART CONTRACT