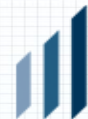


Blockchain and Intellectual Property Rights Who Owns What, How, and Why

Presented By Matt Grady and John Strand

December 8, 2022

PRESENTERS



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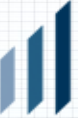
- BS, Duke University
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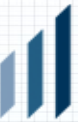
John.Strand@WolfGreenfield.com

- BA, Dickinson College
- JD, Northeastern University School of Law



BLOCKCHAIN

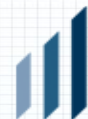
DISTRIBUTED LEDGER TECHNOLOGY AKA “BLOCKCHAIN”



- Distributed Ledger Implementation has been around for decades
- Mature Technology in the sense that the fundamentals are likely to be available to all*
- Interesting implementation is known to exist as early as the 90s – printed in the New York Times classified section
 - A distributed ledger stores data and is maintained by a network of users and in current forms is secured through cryptography. When new information is added the new information is recorded as “blocks” – an encoding of the new information intended as proof of that new information
 - More specifically these blocks have been used as immutable records of financial transactions – however applications have become wide and varied



BENEFITS OF DISTRIBUTED LEDGERS



The Properties of Distributed Ledger Technology (DLT)

Programmable

A blockchain is programmable (i.e. Smart Contracts)

Secure

All records are individually encrypted

Anonymous

The identity of participants is either anonymous or pseudonymous

Unanimous

All network participants agree to the validity of each of the records

Distributed

All network participants have a copy of the ledger for complete transparency

Immutable

Any validated records are irreversible and cannot be changed

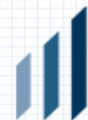
Time-stamped

A transaction timestamp is recorded on a block



© Euromoney Learning 2020

BLOCKCHAIN SUMMARY OF APPLICATIONS



Cryptocurrency (e.g.
Bitcoin)

NFT's (Non-Fungible
Tokens)

Smart Contracts

Blockchain Domains

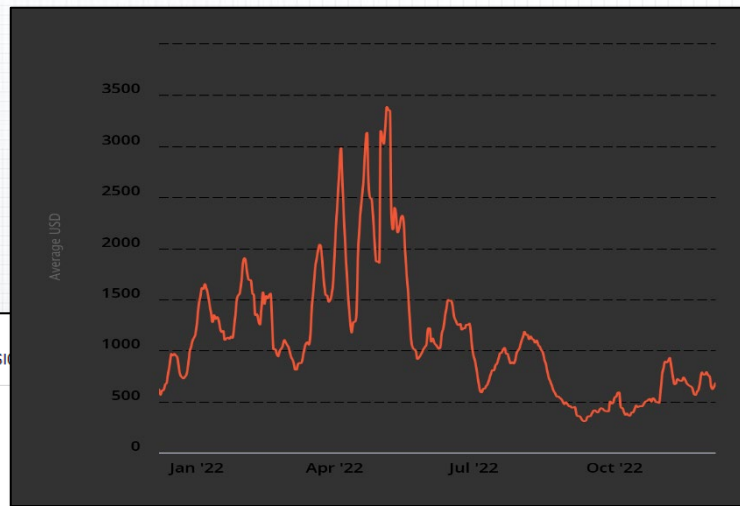
ICO's (Initial Coin Offerings)

DAO's (Decentralized
Autonomous Organizations)





Bitcoin Pricing Dec. 2021 – Dec. 2022



FORTUNE

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SEARCH

Cryptocurrency | Web3 | NFTs | Investing | Bitcoin

NFTS & CULTURE · NFTS

Trading volume on top NFT marketplace OpenSea down 99% in USD from May peak

BY MARCO QUIROZ-GUTIERREZ
August 29, 2022 at 1:03 PM EDT

NFT Pricing Dec. 2021 – Dec. 2022

LITIGATION PATENTS TRADEMARKS TRANSACTIONS




BLOCKCHAIN WHAT CAN YOU PROTECT?



- The fundamental implementation: creating tracking records and encoding them for later validation is known
- The ability to protect your approach with patent comes from creating or implementing an improvement
- Some examples include – self authenticating blocks that avoid mining operations; private and publicly accessible block chains; more efficient encoding and validation; improved security; specific technical applications; Machine Learning integration, etc.
- Who has been patenting in this space? All the big players and even some you would not typically consider – IBM, MicroSoft, Capitol One, and even Walmart

RECENT EXAMPLES

- Heartbeats and consensus in verifiable outsourced ledgers (Microsoft 8/2/2022)
- Leveraging blockchain based machine learning modeling for expense categorization (Capital One 11/29/2022)
- Information management and access control in a database (IBM 8/23/2022)
- Systems and methods for prioritizing trailers at receiving facility (9/13/2022)



 US011403631B2

<p>(12) United States Patent Setty et al.</p> <hr/> <p>(54) HEARTBEATS AND CONSENSUS IN VERIFIABLE OUTSOURCED LEDGERS</p> <p>(71) Applicant: Microsoft Technology Licensing, LLC., Redmond, WA (US)</p> <p>(72) Inventors: Srinath Setty, Redmond, WA (US); Ramarathnam Venkatesan, Redmond, WA (US); Soumya Basu, Ithaca, NY (US)</p> <p>(73) Assignee: Microsoft Technology Licensing, LLC., Redmond, WA (US)</p> <p>(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 223 days.</p> <p>(21) Appl. No.: 16/906,479</p> <p>(22) Filed: Jun. 19, 2020</p> <p>(65) Prior Publication Data US 2020/0320528 A1 Oct. 8, 2020</p> <p>Related U.S. Application Data (63) Continuation of application No. 15/280,857, filed on Sep. 29, 2016, now Pat. No. 10,733,602.</p> <p>(51) Int. CL G06Q 20/38 (2012.01) H04L 9/40 (2022.01)</p>	<p>(10) Patent No.: US 11,403,631 B2 (45) Date of Patent: Aug. 2, 2022</p> <hr/> <p>(52) U.S. CL CPC G06Q 20/3827 (2013.01); G06Q 20/3825 (2013.01); G06Q 20/3829 (2013.01); H04L 63/12 (2013.01); G06Q 2220/00 (2013.01); H04L 63/1433 (2013.01); H04L 2463/102 (2013.01)</p> <p>(58) Field of Classification Search CPC G06Q 20/3827; G06Q 20/3825; G06Q 20/3829; H04L 63/12 See application file for complete search history.</p> <p>(56) References Cited U.S. PATENT DOCUMENTS 2019/0199535 A1* 6/2019 Falk G06F 16/1824 * cited by examiner Primary Examiner — Apu M Mofiz Assistant Examiner — Farhad Agharahami</p> <p>(57) ABSTRACT Heartbeat consensus forming for the state of a digital ledger built upon a blockchain to provide users with the ability to securely, accurately, and verifiably share state information between distrustful parties is provided herein. The digital ledger is hosted in a networked environment, accessible by multiple parties. Heartbeat transactions allow clients, who are not in direct communication with one another and may distrust one another, to verify the integrity of the digital ledger via consensus. The consensus is readily verifiable by each client on its own machine and allows the ledger to be recovered to an agreed-to state in the event of a fault initiated by a client or the host of the ledger, whether malicious or otherwise. The digital ledger is freely movable to different hosts in the event of a fault.</p> <p style="text-align: center;">20 Claims, 12 Drawing Sheets</p>
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ANTICIPATE CHALLENGES



- The question of what you can patent leads to how can you protect your innovation
- Focus on technical aspects, provide examples of how your approach improves the process, the system, the implementation or integrated new technology
- Technical details help tell the story of the invention and convince the Patent Office of patentability



US01151444B2

(12) **United States Patent**
Cheng et al.

(10) **Patent No.:** US 11,514,444 B2
(45) **Date of Patent:** Nov. 29, 2022

(54) **LEVERAGING BLOCKCHAIN BASED MACHINE LEARNING MODELING FOR EXPENSE CATEGORIZATION**

(71) Applicant: **Capital One Services, LLC**, McLean, VA (US)

(72) Inventors: **Liu Si Luo Cheng**, New York, NY (US); **John Fields**, Henrico, VA (US)

(73) Assignee: **Capital One Services, LLC**, McLean, VA (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: 17/087,895

(22) Filed: **Nov. 3, 2020**

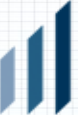
(65) **Prior Publication Data**
US 2022/0138731 A1 May 5, 2022

(51) **Int. Cl.**
G06Q 20/38 (2012.01)
G06F 16/23 (2019.01)
(Continued)

(52) **U.S. Cl.**
CPC *G06Q 20/389* (2013.01); *G06F 16/2379* (2019.01); *G06F 16/285* (2019.01);
(Continued)

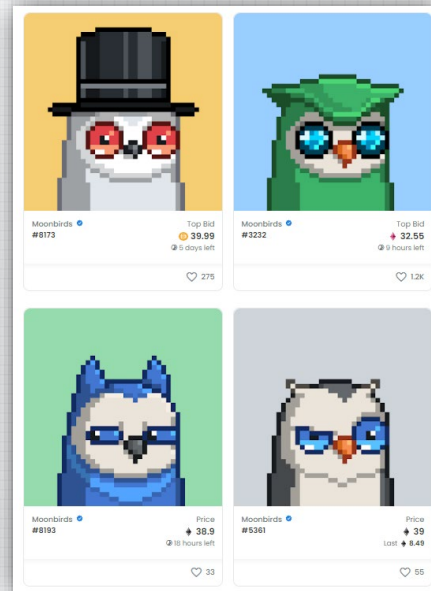
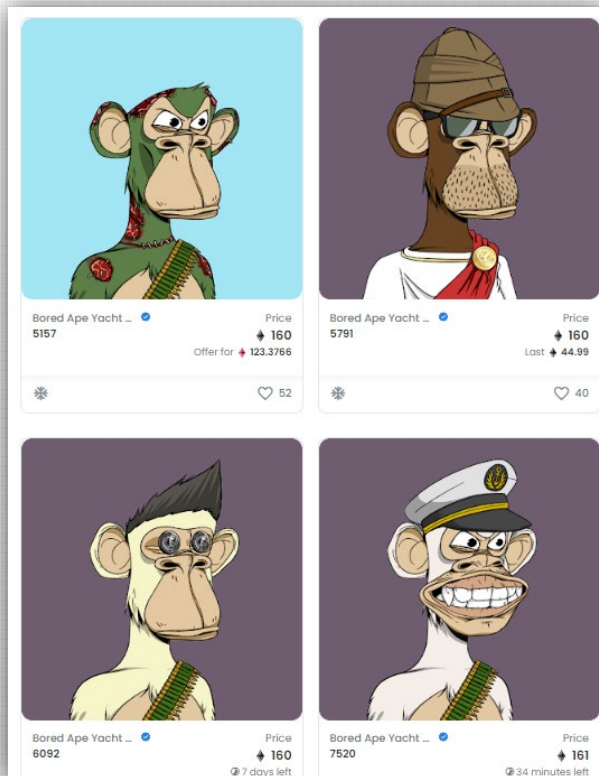
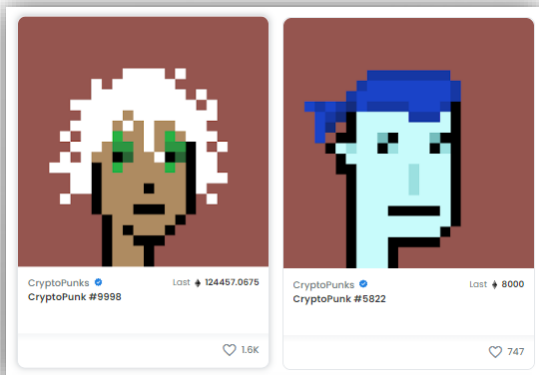
(58) **Field of Classification Search**
CPC *G06Q 30/0205*; *G06Q 20/38215*; *G06Q 10/087*; *G06Q 40/123*; *G06Q 20/389*;
(Continued)

(56) **References Cited**
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9,471,887 B2 10/2016 Shie et al.
2005/0278221 A1 12/2005 Hahn-Carlson et al.
(Continued)
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CA 2817248 A1 8/2012
WO 2017/060850 A1 4/2017
WO 2018/060465 A1 4/2018
OTHER PUBLICATIONS
Bruce Yourself for AI and Blockchain; Accounting Today; Jan. 8, 2018 (Year: 2019).
(Continued)
Primary Examiner — Deirdre D Hatcher
(74) Attorney, Agent, or Firm — Banner & Witcoff, Ltd.
(57) **ABSTRACT**
Systems and methods disclosed herein provide automatic expense categorization of transactions or expenditures based on a machine learning (ML) model trained using anonymized transactional data for expenditures that are stored in a public blockchain. The anonymized transactional data for the expenditure and the expense category, may be distributed throughout the blockchain network and recorded in the blockchain. In some implementations, an expenditure may be submitted to the blockchain network for expense categorization. The transactional data for the expenditure may be anonymized to remove confidential and personal identifying information (PII) before it is distributed throughout the blockchain.
(Continued)



NFTS

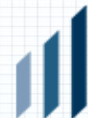
NFTs



LITIGATION PATENTS TRADEMARKS TRANSACTIONS



NFT MARKETPLACE: OPENSEA



Trending

Top

24h

All chains


View all





COLLECTION		VOLUME	COLLECTION		VOLUME
1	<div> <div>The Legend of ...</div> <div>Floor:1.27 ETH</div> </div>	<div>3,015 ETH</div> <div>—</div>	6	<div> <div>Mutant Ape Ya...</div> <div>Floor:14.30 ETH</div> </div>	<div>183 ETH</div> <div>-44%</div>
2	<div> <div>Valhalla</div> <div>Floor:0.48 ETH</div> </div>	<div>1,178 ETH</div> <div>+832%</div>	7	<div> <div>Azuki</div> <div>Floor:13 ETH</div> </div>	<div>140 ETH</div> <div>-60%</div>
3	<div> <div>CryptoPunks</div> </div>	<div>556 ETH</div> <div>-47%</div>	8	<div> <div>Metaphysics b...</div> <div>Floor:1 ETH</div> </div>	<div>125 ETH</div> <div>—</div>
4	<div> <div>CLONE X - X TA...</div> <div>Floor:6.50 ETH</div> </div>	<div>246 ETH</div> <div>-29%</div>	9	<div> <div>Kanpai Pandas</div> <div>Floor:0.74 ETH</div> </div>	<div>123 ETH</div> <div>+166%</div>
5	<div> <div>Dori Samurai</div> <div>Floor:0.62 ETH</div> </div>	<div>213 ETH</div> <div>-64%</div>	10	<div> <div>Cyber Samurai Of...</div> <div>Floor:0.08 ETH</div> </div>	<div>119 ETH</div> <div>+263%</div>


Notable collections

NFT MARKETPLACE: TRADEMARK AND COPYRIGHT








 OpenSea





Pepsi - o2eyIS5sfJ



Items 7 · Created Apr 2022 · Creator fee 2% · Chain Polygon

Pepsi is a carbonated soft drink manufactured by PepsiCo. Originally created and developed in 1893 by Caleb Bradham and introduced as Brad's Drink, it was renamed as Pepsi-Cola in 1898, and then shortened to Pepsi in 1961.
[See less](#)

0 ETH

0%

2

total volume

floor price

best offer

listed


owners

unique owners





Items

Analytics BETA

Activity







Price low to high



[Make collection offer](#)

Updated 26s ago

7 items






Updated 18s ago

5,685 items

pepsi X

Clear all



pepsi




Pepsi - o2eyIS5sfJ

pepsi

Pepsi - o2eyIS5sfJ

Pepsi

Pepsi - o2eyIS5sfJ



pepsi

pepsi

pepsi

NFT MARKETPLACE: OPENSEA TAKEDOWN PROCEDURE

OpenSea IP Takedown Request Form

This form is to be used only for reporting alleged infringements of your IP rights.

Describe your relationship to the rights owner. *

- ☐ I am the rights owner.
- ☒ I am reporting on behalf of my organization or client.
- ☐ I am reporting on behalf of someone else.

Describe why you are reporting this content. *

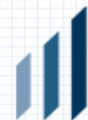
- ☐ This content copies my original work
- ☐ This content uses my name, image, or likeness
- ☒ This content uses my business's trademarked name or logo

Please provide publicly-accessible links to your copyrighted work or describe the rights violation in the box below. *

You may submit multiple links in this entry.



HIGH PROFILE U.S. IP CASES

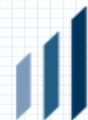


Miramax LLC v. Tarantino



Hermès International v. Rothschild






Nike Inc. v. StockX LLC

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Nike


Buy and sell the greatest Nike shoes. We've got every Nike sneaker, every silhouette, every collaboration, every colorway, in every size. Shop below.



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Nike Dunk Low Retro White Black (2021)

Lowest Ask


\$217



Nike Dunk Low Grey Fog

Lowest Ask

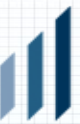
\$269



Nike Dunk High Championship Navy

Lowest Ask

\$160



CLASSIFYING TRADEMARK APPLICATIONS

TRADEMARK ID MANUAL

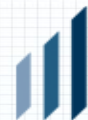


Class	Description
009	Downloadable software for generating cryptographic keys for receiving and spending crypto assets
036	Financial services, namely, electronic transfer of crypto assets
036	Financial exchange of crypto assets
042	Providing on-line non-downloadable software for generating cryptographic keys for receiving and spending crypto assets

Class	Description
009	Downloadable image files containing {indicate subject matter or field, e.g., trading cards, artwork, memes, sneakers, etc.} authenticated by non-fungible tokens (NFTs)
035	Provision of an online marketplace for buyers and sellers of downloadable digital {indicate type of downloadable digital goods, e.g., art images, music, video clips, etc.} authenticated by non-fungible tokens (NFTs)
035	Provision of an online marketplace for buyers and sellers of downloadable digital art images authenticated by non-fungible tokens (NFTs)

Class	Description
009	Downloadable computer software for managing cryptocurrency transactions using blockchain technology
009	Downloadable computer software for managing and validating cryptocurrency transactions using blockchain -based smart contracts
009	Downloadable computer software for managing and verifying cryptocurrency transactions on a blockchain

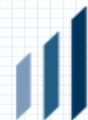
EXAMPLE (AS-FILED)



BORED APE (U.S. Application Serial No. 90/884286)

- Filed August 16, 2021
- Goods/Services:
 - Class 16: digital collectibles; digital collectibles sold as non-fungible tokens
 - Class 35: maintain and record ownership of digital illustrations; maintain and record ownership of digital illustrations represented by non-fungible tokens; providing a website featuring an online marketplace for exchanging digital collectibles
 - Class 42: Computer services, namely, creating an online community for registered users to access a collaborative graffiti board
 - Class 45: online social networking services provided through a members-only website

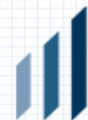
EXAMPLE (NON-FINAL OFFICE ACTION)



BORED APE (U.S. Application Serial No. 90/884286)

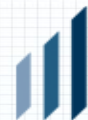
- Non-Final Office Action issued March 21, 2022
 - Class 9: Digital collectibles in the nature of downloadable multimedia file containing artwork relating to {indicate field or subject matter of file} authenticated by non-fungible tokens (NFTs); Digital collectibles in the nature of downloadable image files containing {indicate subject matter or field, e.g., trading cards, artwork, memes, sneakers, etc.} authenticated by non-fungible tokens (NFTs)
 - ~~Class 16: digital collectibles; digital collectibles sold as non-fungible tokens~~
 - Class 35: Maintaining and recording ownership of art prints comprised of digital illustrations originating from photographs; maintaining and recording ownership of downloadable image files featuring digital illustrations authenticated by non-fungible tokens; Provision of an online marketplace for buyers and sellers of downloadable digital collectibles in the nature of {indicate type of downloadable digital goods, e.g., art images, music, video clips, etc.} authenticated by non-fungible tokens (NFTs)
 - Class 45: online social networking services provided through a members-only website;
 - Class 42: Computer services, namely, creating an online community for registered users to access a collaborative graffiti board

EXAMPLE



VALENTINO (U.S. Application Serial No. 97/365869)

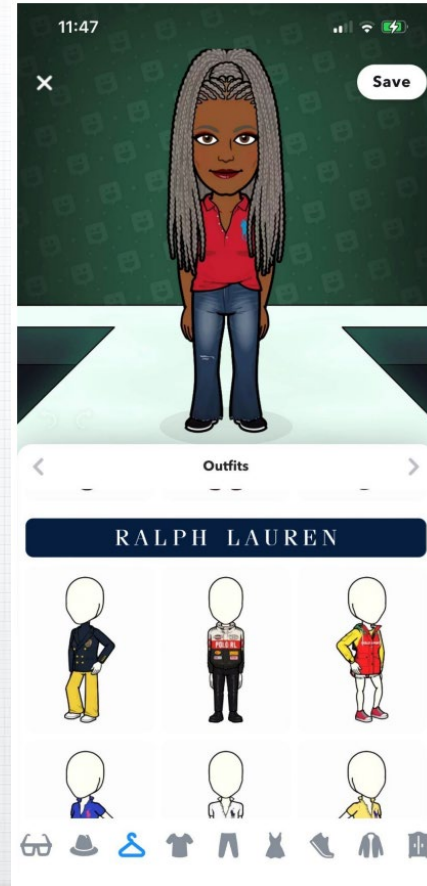
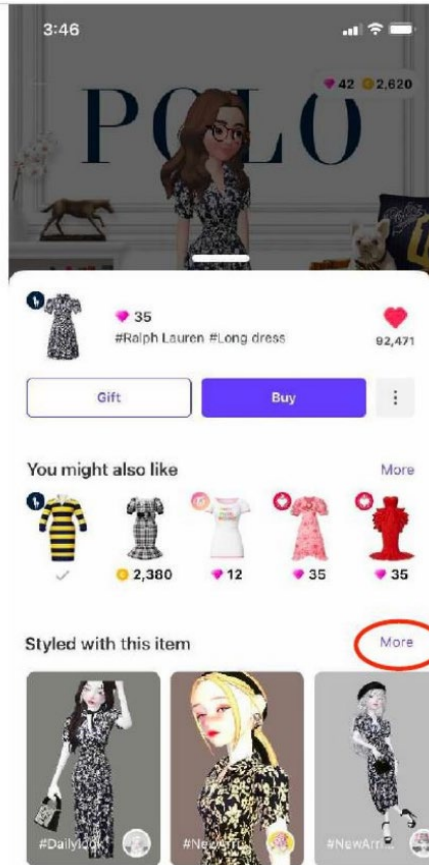
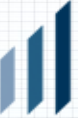
- Filed April 15, 2022
- Goods/Services:
 - Class 9: Downloadable virtual goods, namely, computer programs featuring footwear, clothing, headwear, eyewear, perfumery, jewelry, furniture, and accessories for use online and in online virtual worlds; Downloadable digital assets and electronic data files provided with non-fungible tokens (NFTs) and other crypto collectibles and block chain-based non-fungible assets
 - Class 35: Retail store services featuring virtual goods, namely, footwear, clothing, headwear, eyewear, perfumery, jewelry, furniture, and accessories for use online; on-line retail store services featuring virtual merchandise, namely, footwear, clothing, headwear, eyewear, perfumery, jewelry, furniture and accessories
 - Class 41: Entertainment services, namely, providing on-line, non-downloadable virtual footwear, clothing, headwear, eyewear, perfumery, jewelry, furniture, and accessories for use in virtual environments
 - Class 42: Non-Fungible Tokens used with block chain technology; non-fungible tokens used with block chain technology to represent a collectible item; Software platforms for providing access to crypto-collectibles, non-fungible tokens and other application tokens; providing temporary use of online non-downloadable software for use in electronically trading, storing, sending, receiving, accepting and transmitting digital currency, crypto-collectibles, non-fungible tokens and other application tokens, and managing digital transactions; hosting an online community website; Providing non-downloadable computer software in the nature of crypto-collectibles and non-fungible tokens (NFTs)



RALPH LAUREN (U.S. Application Serial No. 97/163420)

- Filed December 8, 2021
- Goods/Services:
 - Class 35: Retail store services featuring virtual goods, namely, clothing and accessories for use in online virtual worlds
 - Class 41: Entertainment services, namely, providing on-line, non-downloadable virtual clothing and accessories for use in virtual environments created for entertainment purposes

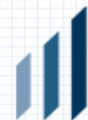
SPECIMENS (RALPH LAUREN (U.S. Application Serial No. 97/163420))





PROTECTION AT THE USPTO

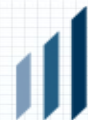
IP CASES: SQUATTERS AT THE TRADEMARK OFFICE



GUCCI

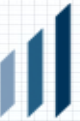
Word Mark	GUCCI
Goods and Services	IC 009. US 021 023 026 036 038. G & S: Downloadable virtual goods, namely, computer programs featuring footwear, clothing, headwear, eyewear, handbags, laptop bags, backpacks, luggage, briefcases, art, toys, jewelry, watches, hair accessories, pet collars, accessories and charms for use in online virtual worlds IC 035. US 100 101 102. G & S: Retail store services featuring virtual goods, namely, footwear, clothing, headwear, eyewear, handbags, laptop bags, backpacks, luggage, briefcases, art, toys, jewelry, watches, hair accessories, pet collars, accessories and charms for use in online virtual worlds IC 041. US 100 101 107. G & S: Entertainment services, namely, providing on-line, non-downloadable virtual footwear, clothing, headwear, eyewear, handbags, laptop bags, backpacks, luggage, briefcases, art, toys, jewelry, watches, hair accessories, pet collars, accessories and charms for use in virtual environments created for entertainment purposes
Standard Characters Claimed	
Mark Drawing Code	(4) STANDARD CHARACTER MARK
Serial Number	97112038
Filing Date	November 6, 2021
Current Basis	1B
Original Filing Basis	1B
Owner	(APPLICANT) HOLMES, FENESHA AMANA INDIVIDUAL UNITED STATES 2411 GABLE HOLLOW LANE KATY TEXAS 77450 (APPLICANT) HOLMES, KAI SHAY INDIVIDUAL UNITED STATES 2411 GABLE HOLLOW LANE KATY TEXAS 77450
Type of Mark	TRADEMARK. SERVICE MARK
Register	PRINCIPAL
Live/Dead Indicator	LIVE

ADDITIONAL RESOURCES



- IP Talk: A Wolf Greenfield Podcast – Episode 16: Riding the NFT Wave with John Strand
- USPTO Training Webinar: Registering trademarks for newer technologies: NFTs, blockchain, cryptocurrency, and virtual goods – December 13 2022, 2–3:30 p.m. ET
- Joint study on intellectual property rights and non-fungible tokens with the USPTO and the US Copyright Office. Webinars in January 2023.

THANK YOU!



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