Industry and Market Overview

Introduction to Bitcoins and the Bitcoin Network

Bitcoin is a decentralized, digital currency that is issued by and transmitted through an open source, math-based protocol platform using cryptographic security that is known as the "Bitcoin Network" which relies on the "Blockchain". The Blockchain is a public ledger of all transactions that have taken place in the Bitcoin network and keeps track of new bitcoins as they are generated. Sites or users using Bitcoin are required to use the Blockchain so the Bitcoin wallets can verify who has how much money at all times. The integrity of the Blockchain is enforced with cryptography, mathematical proofs that provide high levels of security that make it impossible for anybody to interfere with the Blockchain or spend funds from another user's wallet. "Bitcoins can be used to pay for goods and services or can be converted to fiat currencies, such as the US Dollar, at rates determined on Bitcoin Exchanges or in individual end-user-to-end-user transactions under a barter system."

As of January 2018, the Bitcoin user base has a total of 22 million users. Bitcoin allows people to send or receive money across the internet without being linked to a real identity. Bitcoin transactions are permission-less, borderless, censorship-resistant, irreversible, and fast. The basic requirement to own, transfer or use bitcoins is Internet access to connect to the Bitcoin Network. Everyone in the Bitcoin network is considered a peer and transactions can only take place from peer to peer, although a number of sites, called "exchanges", exist to make these transactions simpler. Exchanges provide tools for dealing in Bitcoin including the prominent "wallet" service. A wallet is essentially a bitcoin account that holds each user's Bitcoin address(es).

Bitcoin connects buyers and sellers through their Bitcoin "address", an identifier of 26-35 alphanumeric characters that represents a possible destination for a bitcoin payment. Rather than keeping track of users, Bitcoin keeps track of addresses where the money is. Each address is comprised of two important keys: the public key, similar to an email address that anyone can look up and send bitcoins to and the private key, similar to an email password that only the owner can use to send bitcoins from. The private key is like a mathematical signature that prevents the transaction from being altered and proves that the bitcoins have come from the owner of the wallet. The integrity of the Bitcoin address is enforced by public key cryptography.

Bitcoin is decentralized meaning that there is no government institution or other authority that creates it, transmits it, or determines its value. "The value of bitcoins is determined by the supply of and demand for bitcoins in the Bitcoin Exchange Market (and in private end-user-to-end-user transactions), as well as the number of merchants that accept them." Rather than being issued like traditional currency, Bitcoin is "mined" by powerful computers. Bitcoin mining is the process of making computer hardware do mathematical calculations for the Bitcoin network to confirm transactions and increase security. The difficulty of the mathematical calculations depends on how many people are buying bitcoin at the moment. Bitcoin miners are rewarded with newly created bitcoins.

Transaction Verification (Bitcoin Mining) & Creation of New Bitcoins

Bitcoin miners mine bitcoin by doing a combination of advanced math and record-keeping. They do this with the help of "nodes", powerful computers that run the bitcoin software and relaying bitcoin transactions around the network. Transactions between users made over a certain period of time are recorded by the Bitcoin Network in a "block" that is inscribed in a public, digital ledger. Collectively, these blocks form the "Blockchain" and usually begin to be confirmed by the network

in the following 10 minutes, through mining. Miners convert these blocks into sequences of code, known as a "hash", by solving complex math problems. The first miner or group of miners to solve the particular problem and produce a hash are rewarded with Bitcoins. By mining Bitcoin and verifying transactions, miners are helping to prevent "double-spending", when a Bitcoin user illicitly spends the same money twice. Mining enforces a chronological order in the Blockchain, protects the neutrality of the network, and prevents previous blocks from being modified thus ensuring the security of the Blockchain.

Bitcoin mining hardware runs a SHA256 cryptographic hash function on a "block header", an 80-byte header belonging to a single block. The hash of a block must start with a certain number of zeros. For each new hash that is tried, miners use a different number, called a "nonce", as the random element of the block header. To "solve" a block, miners must find a hash of a block header that is below or equal to the "difficulty target". Mining difficulty is a measure of how hard it is to find a hash below a given target. In other words, the SHA256 hash of a block header must be lower than or equal to the target in order for the block to be valid. In order to keep blocks coming every 10 minutes, the Bitcoin network has a global block difficulty that is adjusted using a shared formula every 2016 blocks.

The bitcoin mining process is designed to be both resource-intensive and difficult to ensure a steady number of blocks is found each day. For a block to be considered valid, it must be hashed repeatedly to create "proof of work". Proof of work is a method that ensures that the new block was difficult to be made so as to satisfy certain requirements. If any miner maliciously tries to release invalid blocks that do not meet the required difficulty target, they will not contain proof of work and therefore will simply be rejected.

As more miners join the Bitcoin network, the processing power of the network increases and the rate of block creation goes up. When the block creation rate increases, the average mining time decreases. To compensate, the difficulty rises to push the rate of block creation back down and the average mining time goes back to normal (10 minutes). This target value is recalculated every two weeks.

A disproportionately large number of blocks are mined by "pools" rather than by individual miners. Mining pools allow miners to pool their resources together and share their hashing power to generate blocks. If they are successful, they split the reward equally according to the amount of shares they contributed to solving a block. At the current network difficulty level, it could take years for individual miners to generate a block, but mining pools allow users to generate blocks quicker and receive a share of the block reward on a consistent basis. As of January 14, 2018, the largest three mining pools, AntPool, BTC.com, and ViaBTC, represent a combined 50% of the processing power on the Bitcoin Network.

Miners dedicate substantial time and resources to mining. Mining devices are expensive and require a significant amount of electricity to continuously power and cool them while they are solving problems. The current reward for successfully producing a hash is 12.5 bitcoins, which at the time of writing is worth almost $200,000. The number of bitcoins awarded as a reward for solving the puzzle will decrease (it will halve every 210,000 blocks). Miners can also be rewarded with the fees paid by users sending transactions, and as the number of bitcoins awarded dwindles, the fees will become the greater source of mining income.

Risks in the Bitcoin Network

Bitcoin as both an investment and currency is very risky. The financial value of a bitcoin is highly volatile and open to interpretation. While more internet vendors have started accepting Bitcoin as a form of payment, the IRS views bitcoins as property, not currency.

The anonymity of bitcoin comes with drawbacks as it is extremely difficult to determine someone's identity based off their Bitcoin address. The Bitcoin Network was not designed to ensure the anonymity of users, however, and any individual or government can trace the flow of bitcoins from one address to another.

The Bitcoin Network is not impervious to theft or hackers. Bitcoin transactions are final meaning that there are few avenues for pursuing refunds, challenging a transaction or recovering any losses.

Bitcoin Value

Bitcoins cannot be printed or debased and are not backed by hard assets or other credit. Therefore, the value of a bitcoin is ultimately determined by what people are willing to pay for it. Only 21 million bitcoins will ever exist (expected to be mined by 2140) and about 12 million have been mined so far. Like gold, there is a limited supply but no real intrinsic value.

Executive Summary

GD ENTERTAINMENT & TECHNOLOGY, also known as GDET, is a result driven, blockchain-oriented company focused on becoming a premier Cryptocurrency mining facility.

GDET has already procured over 120 of the Bitmain 2913.5 th/s machines directly from suppliers overseas and has developed a strong relationship to ensure future purchasing.

GDET has secured an industry changing facility in the Tri state area with a scalable space that has been retrofitted to support the electricity needed for an excess of 1000 standard machines.
We are aware of the increasing competition in mining Cryptocurrency as well as the demands of operating a standard mining company which is why we have subsidized operational costs to maximize profits, maintain unmatched structural integrity, and expedite mining rates.

GDET will build and manage a cryptocurrency mining colocation and mining facility that is client-focused and dedicated to creating a new standard in the Blockchain space based on security and transparency. We plan on expanding operations to support other entities who wish to take advantage of the mining facility though co facilitation.

Products and Services

GD ENTERTAINMENT & TECHNOLOGY is going to offer a variety of services relating to the cryptocurrency industry. GDET aspires to be the 'We Work' of the crypto space and will offer services including:

- purchasing, leasing, and maintenance through our mining facility.
- Colocation of cryptocurrency mining equipment, for both small scale and mid-scale mining equipment owners (as little as 1 machine)
- Sales of cryptocurrency mining equipment.
- Management of collocated cryptocurrency mining equipment.
- Consulting on cryptocurrency mining operations

We intend on both creating new investment opportunities and educating those interested in the field. GDET will be disclosing its full output of the operation in real time and providing multiple vehicles in the Blockchain space for individuals to explore depending on what sector they are most interested in.

GDET plans on reaching an international clientele by including overseas investors and having customers send their machines from abroad to be used here.

Marketing Plan

We are mindful of the fact that there is fast-growing competition in mining Cryptocurrency due to the amount of individuals/entities who are looking to enter the business, but we are prepared to use the following marketing strategies to attract clients:

- Advertise on major cryptocurrency websites
- Sponsor and present at cryptocurrency conventions and trade shows
- Direct to consumer solicitation, targeting mid-scale cryptocurrency mining equipment workers

Operational Plan

The day to day operations of GDET include a focus on maximizing ROI while maintaining structural integrity. We will build out and equip a facility that can be scalable to host additional machines.

In order to continue to attract customers we will would out the company retail website with an e-commerce portal that allows customers to sign up for co-location services online as well as to purchase machines.

In order to ensure that our operations run smoothly GDET will hire 1-2 staff members to monitor and manage operations.

Management and Organization

GD ENTERTAINMENT & TECHNOLOGY will be managed by its CEO Anil Idnani. As a Bentley University graduate with strong business relationships with suppliers in the cryptocurrency business, Mr. Idnani has adequate working experience to manage such a business.

Startup Expenses and Capitalization

	Total
Equipment & Technology:	
Initial cryptocurrency mining equipment (Bitmain Antminer S9S)	$60,000
General & Administration:	
Legal Fees	$10,000
Accounting	$4,000
Location:	
Secure lease (deposit + fees) and power purchase agreement	$15,000

Growth Expenses

One of GTED's major goals is to build a premier Cryptocurrency business that will survive off its own cash flow. To ensure that GTED Is both a leading bitcoin mining company and attractive to customers we will hire and retain the best hands we can get in the industry and keep up with the latest technology.

Purchasing additional mining equipment (Bitmain Antminer S9s, Avalon Miner, High end graphics cards for Etherum Mining)	$3,000,000
Expanding current facility	$600,000
Hiring staff members	$250,000
Marketing	$300,000

Financial Plan

GD ENTERTAINMENT & TECHNOLOGY expects that with our facility at full capacity, the $3,000,000 of mining equipment that we will purchase out of the proceeds of the offering to generate approximately $5,000,000 in revenue per year.[1]

We expect to charge individuals who want to host to our facility a monthly service charge of approximatively $100/machine/month, depending on cost of electricity and market conditions, with bulk/volume discounts.

We are hoping to host at least 500 machines for our customers in the first 12 months.

We have the ability to wholesale and retail mining equipment with competitive pricing and delivery dates.

[1] These numbers are current only as of the date of this press release and will depend upon a number of factors including the price of Bitcoin, electricity costs, the total network hash rate and the block reward.
Disclosure: Mining metrics are calculated based on a network hash rate of 18,633,837,452 GH/s and using a BTC - USD exchange rate of 1 BTC = $ 10,326.24. These figures vary based on the total network hash rate and on the BTC to USD conversion rate. Block reward is fixed at 12.5 BTC and future block reward reductions are not taken into account. The average block time used in the calculation is 600 seconds. The electricity price used in generating these metrics is $ .0653 per kWh. Network hash rate varies over time, this is just an estimation based on current values.