**Grand Forks business partners to use cargo container to mine cryptocurrency**

**Adam Kurtz, Grand Forks Herald**

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Apr. 11—For Zach Keenan, mining cryptocurrency started as a way to earn enough money to keep buying video games. Now he's turned it into a full-time business.

Keenan and local businessman Aaron Hall have founded Sundog Mining, via which they plan to "mine" cryptocurrency, the virtual coins that are an increasingly popular investment among tech-minded people. Bitcoin is the most popular, but the pair plan to also mine other digital currencies with lower profiles, including DigiByte and Bitcoin Cash. The specialized computers — mining "rigs" — they plan to use will decide which currency is the most profitable to produce at any given moment, based on the coins' prices and the energy needed to produce one.

Keenan and Hall are working to buy a cargo container, which they plan to fill with mining rigs. They'll set up the container at a Minnkota Power Cooperative substation, from which the mining rigs will draw power at a discount.

It's a long way from when Keenan got his start, in his bedroom in San Antonio, Texas, about eight years ago. Back then, another cryptocurrency, called Ethereum, was trading at about $300 a coin. As of April 8, it's trading at more than $2,000.

"I tapped out my bedroom's power with (the rig) and my gaming PC," said Keenan. "I was like, 'hey dad, I don't have the 1,000 bucks for this because I have to buy the equipment. Can you pull 60 amps into my closet?'"

It took a week of convincing, but Keenan's father upgraded his room's power supply.

Keenan came to North Dakota to attend UND, but has since transferred to Northland Community & Technical College, from which he will soon graduate. He met Hall when he was running a virtual reality arcade at Columbia Mall. That arcade closed at the beginning of the pandemic, but the two became friends, and the seed of an idea germinated from Keenan's past experience mining cryptocurrency.

"It started with 'hey let's devote a room to it in my office,' to 'hey, let's see if we can create a mobile data center,' and it evolved from there," Hall told the Herald.

Cryptocurrencies are a form of online payment for goods or services. They work through a technology called blockchain, spread across multiple computers, which track digital transactions. The currencies can be mined, bought, sold or traded on online exchanges.

This isn't Hall's first venture into business. He worked as a police and parole officer in Devils Lake, and now owns a few businesses in Grand Forks, including Pro Dog Security. Sundog Mining, however, is unique to the region.

It's a turnaround from the usual notion of a cryptocurrency data processing center. Those centers, fixed locations, require millions of dollars of infrastructure upgrades to accommodate the enormous amount of electricity required to run the machines.

One data processing business, called Coinmint, and located inside a former aluminum smelting plant in Massena, N.Y., bills itself as the largest crypto-mining operation in the world. The company invested heavily to bring electrical infrastructure to the plant, and large companies pass on those costs to customers looking for hosting services — the ability to use those computers to mine cryptocurrency.

Sundog does the opposite and takes the plant to the power, which means it can bypass those costs. The company received a $225,000 loan from the Grand Forks Jobs Development Authority, which it will combine with a Gate City Bank loan and owner equity to get up and running for $418,000. Monthly hosting fees for miners could run about $170 per month.

"We've kind of sidestepped (those costs) by saying we're going to put it where there is that availability," Hall said.

The partners are awaiting the delivery of a Canadian-designed cargo container, one with electrical hookups, cooling equipment and air exchangers. They'll fit it out with up to 900 mining rigs, and place it at a Minnkota substation in Grand Forks' industrial park. It's an ideal spot, because the substation isn't operating at peak capacity, due to a lack of need. The company will buy that surplus power, and let customers anywhere in the world use its rigs. When that power is needed for other businesses or the city, the container can be moved to another location.

According to Hall, there are sufficient "trapped resources," meaning abundant power, to add more containers in the future. Doing that would mean adding jobs — technicians — to take care of the equipment. For now, it's just them.

And those bedroom closet electrical upgrades remain in place at Keenan's parent's home, where his involvement with crypto-mining got started.

"He still has all that power in there and I'm sure that's going to be an interesting reselling feature," he said.