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Kathryn Gioia is an associate attorney at Bowles Rice who focuses her practice on estate/tax planning and administration, including the preparation of estate planning documents, digital asset planning, and much more. Gioia practices primarily from the firm's Southpointe, Pennsylvania office.

Preparing for the Future with Digital Assets

Blockchain technology was invented in 1991 to serve as a digital notary and to prevent backdating. However, blockchain technology did not gain traction until the advent of cryptocurrency. A blockchain is a chain of blocks that store information, where each block has three important parts: (1) data, such as the buyer and seller name; (2) a hash, or digital fingerprint that identifies a block and its contents; and (3) the hash of the previous block. The only way to access the blockchain is to have a key. If someone should rewrite the contents of the block, the hash changes, thereby breaking the chain. Therefore, it is nearly impossible to counterfeit or double-spend.

As digital assets like cryptocurrency and non-fungible tokens (NFTs) have garnered significant public attention, the technology behind it - blockchain technology - is being exponentially applied across multiple sectors, to great success.

Health Care

Blockchain platforms can help medical providers securely manage health information. Blockchain technology can be used to store and securely encrypt patient data across providers that have access to the network key. This creates a public ledger, to those that have access to the keys, which can ultimately improve patient outcomes and reduce health care costs.

Supply Chain Management

Blockchain technology can be used to track the movement of goods across the supply chain. For supply chains, the blockchain is limited to a number of known and permitted parties to protect their business from malicious actors. This can enable faster and more cost-efficient delivery of products, enhance the ability to

trace products, improve communication amongst parties, and reduce overall costs.

Energy Trading

Blockchain technology can create a decentralized energy trading network. Deal terms can be executed and recorded on the blockchain, where all activity is easily available to those that have the key, such as the seller, buyer, energy provider, and bank. Blockchain can also be used to convey title of a physical commodity. Ultimately, the technology can increase the speed of exchange and improve auditability of records.

Gaming

Blockchain has created a new sub-genre of games called "Crypto-Games," which, although similar to traditional gaming, allows players to earn cryptocurrency or NFTs by playing. Blockchain also enables tournaments to track winners of games and ensure accurate disbursement of winnings.

Smart Contracts

A smart contract is a self-executing contract with the terms of the agreement between the buyer and seller being directly written into the blockchain. By utilizing blockchain technology, it increases efficiency of contract execution and eliminates fears that the contract can be rewritten, as the programming cannot be altered.

The evolution of blockchain technology and its uses are leading us to a new iteration of online technology known as Web3. Web3 is the idea that the internet, as we know it, is being rethought, and that blockchain will be the new method for storage, sharing, and ownership of Digital Assets. Time will only tell how this technology will evolve and shape the business of the future.



Digital Assets and Authority to Access

For many people, digital assets are already a widely accepted reality and a significant part of their financial portfolios. Such acceptance also warrants consideration of tax regulations and implications, including estate planning and administration. For instance, what happens if you own cryptocurrency, cryptogames, NFTs, smart contracts, or other digital assets and you become incapacitated or die? Can your fiduciary handle these digital assets and, if so, how?

Federal law restricts access to the content of your electronic communications by government or law enforcement without a warrant. And Service Providers (i.e., Google, Yahoo, Facebook, Robinhood, Coinbase, OpenSea, etc.) may not release the content of communications to anyone else without your consent as the "User" of the account. But what if you want someone to be able to access and handle your digital assets (i.e., pay bills or maintain investments) should you become incapacitated or hospitalized, or even after your death in order to distribute those assets to your benefactors?

Your desire is not enough. There must be clear authority given to access your digital accounts.

The order is as follows:

- What does the Service Provider's account Terms of Service (TOS) authorize?
 - a. Do the TOS automatically authorize access by a courtappointed fiduciary? Traditionally, the answer is no, under federal law as stated above. However, several Service Providers (Apple, Google, Facebook, etc.) have expanded their account settings to permit the User to set up a legacy contact. For example, Google allows a User to set up an "Inactive Account Manager" in the User's account settings in case the User fails to access his/her account within a certain number of days. This authorizes Google to contact the Inactive Account Manager to handle the account in whatever manner the User has selected, i.e., terminate the account, freeze the account, provide full access to the account, etc. Google also gives the User the ability to limit the data that the Inactive Account Manager will have access to, i.e., just to Gmail, family photos, Google Drive, etc., or to everything.
- Does your Financial Power of Attorney, Will and/or Trust include Revised Uniform Fiduciary Access to Digital Accounts Act (RUFADAA) language, authorizing your fiduciary to access digital accounts?
 - a. Note that RUFADAA language is only helpful to your fiduciary if your digital asset is stored and accessed via a third-party Service Provider (similar to traditional bank and investment accounts), not directly on the blockchain.

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BLOCKCHAIN VOTING MECHANISM



SMART CONTRACT



BLOCKCHAIN MEDICAL RECORD SYSTEM

Making the invisible economy visible

Bearing none of the visible hallmarks of earlier economic eras (e.g., agricultural, industrial), the tech economy has been practically invisible to underestimated humans. To secure equity in tech, West Virginia's leading stewards of local economies - from government to business to economic to innovation to workforce to community development must tangibly offer underestimated humans new economic mobility pathways to tech. These stewards are singularly best able to illuminate the tremendous opportunities in the tech economy and cultivate with Bitwise Industries the most favorable conditions for underestimated humans to compete and win in tech.

The upshot is that the Bitwise Industries story is about equity. Breathing life into the simple equation (equity = ownership), we illustrate that equipping underestimated humans with the skills to gain ownership stakes in tech is a powerful solution for which the time has come. Until now, the tech economy has altogether missed underestimated humans and communities, not only in West Virginia, but in similarly situated places throughout the U.S.

Bitwise Industries provides new ways to change that. The remaining question is whether we have the will? V



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Strengthening the **West Virginia Energy Mix**

reactor plant at one of Dow's U.S. Gulf Coast sites through the U.S. Department of Energy's Advanced Reactor Demonstration Program. It will serve as a leading example of how nuclear technology can be applied in the industrial sector to reduce the carbon footprint of industrial products and simultaneously providing safe, clean, affordable electricity.

West Virginia's energy transition can propel the state into a leader of energy production for the rest of the century, retain young people in the state by providing jobs for the next generation workforce, and attract new industry to the state. This is a generational opportunity. Eyes are on all sectors of the economy to make investments today to produce clean and affordable energy while bolstering our competitive and economic edge in the world. In partnership, progress, and proactive efforts, West Virginia is positioned to capitalize on its legacy of a U.S. energy production leader. V

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Sarah Armstrong Tucker

Higher Education Programs Helping Students Land Careers in the New Economy

Through new programming like the historic dual enrollment pilot, to vast financial aid opportunities and longstanding programs, like Learn & Earn, West Virginia is undoubtedly investing more strongly in our citizens' education and West Virginia's workforce than ever before. This is a testament to our state's commitment to a stronger future - and to taking full advantage of opportunities in the New Economy.

Details about West Virginia's dual enrollment program will be announced in the coming months. Information on each of our state's financial aid programs can be found at collegeforwv.com. Information about workforce partnerships like Learn & Earn can be found at wvctcs.org/grants/. V





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Hannah French and Kathryn Gioia

Preparing for the Future with Digital Assets

3. Does your Financial Power of Attorney, Will and/or Trust include language above and beyond RUFADAA, authorizing your fiduciary access to digital assets stored directly on the blockchain?

These are legitimate issues and considerations that can have a major impact on an account holder and their beneficiaries, and the complicated nature of such digital assets will continue to evolve as they grow in popularity and global acceptance. For real-world examples, considerations, and hypotheticals, visit the Bowles Rice Tax Team blog, Taxation With Representation, at www.bowlesrice.com/taxation-with-representation-blog to read the companion piece to this article. V