BY
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Blockchain, its affordability & Accounting

Neal Costigan looks at the efficiencies and the improved process gained through using blockchain for accounting.

Technological Revolutions

Technologies we take for granted today were once quiet revolutions in their time. Take the World Wide Web which became publicly available in 1991. From a single machine in Switzerland to a global network of computers, laptops, smartphones, and tablets, the web is deeply ingrained in our everyday lives which seemed an unrealistic thought at inception with its fair share of scepticism.

An example of such scepticism came in the form of an article published in a Newsweek magazine on February 27, 1995, under the headline ***"The Internet? Bah!"***. Clifford Stoll a notable astronomer, scientist, author, teacher and PhD publicly criticised the future vision of the World Wide Web saying: "***Visionaries see a future of telecommuting workers, interactive libraries and multimedia classrooms. They speak of electronic town meetings and virtual communities. Commerce and business will shift from offices and malls to networks and modems".*** He goes on to say: ***"The truth is no online database will replace your daily newspaper, no CD-ROM can take the place of a competent teacher and no computer network will change the way government works".*** Within months of Newsweek's publication, Amazon began selling books online, followed shortly by the rise of Google, the search engine that made the Web something less than the ***"big ocean of unedited data"*** that Stoll lamented.

Blockchain Technology

Fast forward almost 30 years and we are currently seeing another technological revolution but maybe not so reticent this time, the blockchain revolution. A blockchain is a public distributed ledger, in which all who choose to participate in it have the autonomy to access it. Simply put, a blockchain is like a spreadsheet anyone can access. There are many different blockchains; Ethereum and Bitcoin are just two examples amongst hundreds of other protocols, which co-exist in the blockchain ecosystem.

Every participant has a copy of the spreadsheet and is responsible for keeping it up to date. The process of keeping a blockchain up to date is called "mining", which is performed by miners who are incentivized through cryptocurrency to perform the role of transaction validators.

Blockchain Critics

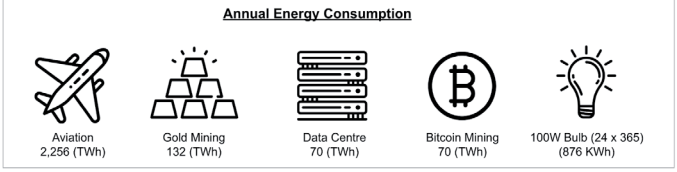
The blockchain revolution is no different when it comes to the number of individuals critiquing its true value to the world. J.P. Morgan Chase CEO, Jamie Dimon, recently trashed cryptocurrency bitcoin as "***a fraud that will blow up***". While billionaire chairman and CEO of Berkshire Hathaway, Warren Buffett, said "***Bitcoin itself is creating nothing. When you're buying non-productive assets, all you're counting on is the next person is going to pay you more because they're even more excited about another next person coming along".***

It is no secret that the technology has faced issues around transaction speed, cost and scalability but they have either been solved already or soon will be. The most damning challenge blockchain faces since its initiation, is the amount of energy it consumes and the understanding of this topic by the greater public.

Proof-of-Work v Proof-of-Stake

How the Bitcoin network is managed is through a highly controversial Proof-of-Work (POW) security protocol which requires miners to solve cryptographic math problems in exchange for receiving bitcoin. These cryptographic problems are growing in difficulty over time and this, in turn, is driving up the equipment needed and in turn electricity costs. To maintain the Bitcoin network a total of 73.2 terawatt-hours a year is exerted, this is the equivalent to Austria's total annual energy consumption. This is a significant problem for the Bitcoin network and to make matters worse, this figure is estimated to increase further, with no plans to move to a lower energy model.

However, the public Ethereum network, which is now the largest and most used blockchain in terms of transactions and computations, is readying to shift away from POW to an alternative low-energy consensus mechanism called Proof-of-Stake. To achieve this reduction in energy, Proof of Stake replaces the high energy costs associated with mining in the POW with security deposits to incentivize validators to maintain the network. This move to a lower energy consumption model will also allow the role of validating blocks (e.g. mining) to be more accessible to anyone in the community, whereas currently this role is exclusively reserved for large-scale operations such Bitmain and GigaWatt.



While there have been significant efforts to reduce energy consumption within the blockchain industry it is interesting to contextualize the total energy consumption and annual economic costs of different industries, with bitcoin mining. The annual economic costs of Bitcoin today is $3.5 billion per year, meaning that Bitcoin costs 500 times less than the global banking industry and 30 times less than gold mining.

Blockchain & Accounting

Along this journey, we have encountered some of blockchain's imperfections but often it's the imperfections which make things beautiful and it is clear that the accounting industry sees it's true beauty and value.

If there are tasks that are still being performed manually, it's costing companies time and consequently money. To achieve daily targets, the accounting industry still relies on mutual control mechanisms, checks and balances. Among other things, there is a systematic duplication of efforts, extensive documentation and periodical controls with most of them being manual and far from being automated.

Accountants currently store data in disparate locations with no way to consolidate and validate it. For accountants, blockchain offers new ways of storing and sharing data, providing clarity over ownership of assets and the existence of obligations, which could dramatically improve efficiency. Currently, the majority of audit clients typically take a week or more to close their month-end accounts. With blockchain, this can be done within hours, streamlining the entire process.

Balanc3

Balanc3,a ConsenSys formation has been working for over a year to build out a blockchain-based financial management platform for the token world. It has brought together leaders in both the accounting and blockchain industries to build a platform that interprets blockchain transactions and transforms that data into financial and business insights. Balanc3 translates on-chain transactions and data into traditional accounting formats needed for reporting and compliance resulting in a technology which helps build a user-friendly bridge between the "token world" and traditional accounting systems.

Conclusion

In the world of innovation, learning from failures is an inescapable reality and part of growth and success in organisations. It is how the ecosystem and entrepreneurs move forward to greater heights. For accounting and blockchain to be as much of a success story as the world wide web, it must critically analyse its flaws, iteratively build on current failures and listen to users to build the most effective, intuitive and worthy platforms. The efficiencies and improved processes gained through using blockchain for accounting will bring about cost reductions and increased productivity, a recipe for success for accounting firms willing to be innovative in this space.