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Blockchain technology: a bit more than a coin

By Jonathan Michaels

There once existed a time when technological advances brought us “amazing” inventions, like the microwave oven or the cordless phone. In the day, it seemed as if life suddenly moved from a gray-scale existence to a two-dimensional kaleidoscope of colorful brilliance, as fax machines, cable TV and portable cassette players dazzled consumers by the millions. Against the backdrop of the horse-drawn carriage, such innovation seemed simply mind-blowing.

Today, the curve of societal advancement is practically vertical, exponentially multiplying itself with every fortnight that passes. Our present-day Generation Z youngsters chuckle at concepts that society used to consider ground-breaking, as they board a well-fueled bullet train into the mysterious future. To be sure, analog thinking will never be revived.

If technology can be compared to a metaphorical speedboat, then bitcoin is madman behind the wheel. A modern form of currency, bitcoin is a snippet of code that represents ownership of a digital concept, allowing consumers to send and receive payments without passing through a central authority. Unlike traditional fiat currency, where governments and central banks can issue as many units as they want, bitcoin is tightly controlled by an underlying algorithm formula that allows a small number of new bitcoins trickle out every hour until a maximum of 21 million units has been reached.

The consuming public is consuming bitcoin in ravenous fashion. When the cryptocurrency was introduced in 2010, it traded at \$0.08 per coin. By December 2017, the price had skyrocketed to \$19,800 per coin — a 25 million percent increase — before settling down to its current price of \$9,500. If we had only known then what we know now; a \$40 early investment in bitcoin would have produced a freshly-minted billionaire.

Bitcoin is based on a concept called blockchain technology, an electronic ledger of sorts created in 2008 by a person or group known as Satoshi Nakamoto. A blockchain is a series of electronic records, or blocks, that are securely linked together using a cryptograph method, a mechanism of constructing and analyzing protocols that prevent third parties from reading private messages. Information contained in blockchains cannot be altered in any way, creating a safe haven for all sorts of private data.

Blockchain technology is advancing so fast that in 2014 we migrated to its second-generation ap-



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In a photo provided by Porsche, the Porsche all-electric Mission E sedan. In the Mission E, Porsche is exploring the possibility of having the vehicle digitally sign a roaming contract to recharge its battery wirelessly, all while handling the subsequent payment itself.

plication, a remarkable statement given that much of the consuming public was not even aware of its first. As reflected in a paper from the Economist, the second-generation blockchain is “a programming language that allows users to write more sophisticated smart contracts, thus creating invoices that pay themselves when a shipment arrives or share certificates which automatically send their owners dividends if profits reach a certain level.”

Marveled by its endless applications, the automotive industry has emerged as a front-runner in adopting blockchain technology. In supply chain management, where success or failure lives on the edge of just-in-time delivery, blockchain implications can harmonize individual stages of manufacturing, bringing plant-wide efficiency. Automobile production facilities have traditionally homologated a myriad independent sub-manufacturing processes, culminating in a single finished product. With blockchain technology, these islands can be efficiently managed, maximizing efficiency and reducing waste. Blockchain has the ability to be as revolutionary to the manufacturing process as Henry Ford was to the assembly line.

And Porsche is committed to bringing the technology mainstream. In a pilot program, Porsche is testing blockchain’s impact on the interconnectivity of cars and the storage of sensitive consumer behavioral data. Noting that traditional central servers can be hacked, Porsche believes that the security blockchain brings to the discussion is revolutionary.

As a for instance, in its new Mission E full-electric car, Porsche is exploring the possibility of having the vehicle digitally sign a roaming contract to recharge its battery wirelessly, all while handling the subsequent payment itself.

Porsche has also developed an app that will allow the consumer to unlock its car in 1.6 seconds — six times faster than current technology that uses a centralized server. There are also other possibilities, such as having the car pay tolls, parking fees and other charges itself.

Idom, one of Japan’s largest used car automotive groups, has partnered with the country’s largest cryptocurrency exchange Bitflyer to enable bitcoin payments at its dealerships across Japan. So far, 26 dealerships have started accepting bitcoin payments, with another 550 locations to be added.

Equally as far reaching is the global blockchain company Uservice, an automotive service provider aimed at created an ecosystem for the life of a car. Currently, car ownership and service is highly fragmented, with certain ambiguity over whether the car has ever been in an accident, whether the vehicle has deferred maintenance and supplying banking and insuring needs.

Uservice aims to change all of this by optimizing all processes related to the purchasing, operation and maintenance of a car. Combining a large number of dealers, car service providers, insurance companies, financing companies and suppliers of spare parts, Uservice hopes to create one single, secure chain for the life of each vehicle, eliminating questions of vehicle history and streamlining the ownership process.

Auto-sharing is also likely to be effected by blockchain technology. Ernst & Young recently announced that it is launching a blockchain-based system that will enable companies or groups of individuals to more easily share vehicle ownership. Recording vehicle ownership, logging the use of vehicles, and apportioning insurance costs and other transactions among a group of owners could change the way we approach owning a car.

Blockchain technology is about to revolutionize our lives, much in the same way personal computing changed the speed of commerce. There will be some confusion and discomfort for sure, but in the long run cryptotechnology change the way we interact with the world in which we live, bringing with it secure streamlined processes that centralize acres of independent data.



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