Written by B. Sai Shrita Friday, 02 November 2018 00:00



Blockchain, a popular term among current businesses, has shown an increase of 250% in Google searches in the last one year.

The US Government had a discussion on its most popular application of cryptocurrency recently. Several companies have shown interest in it and have listed it against their company's name.

The electronics giant, Samsung, from South Korea, has again taken the limelight on June 20<sup>th</sup>, 2018 by announcing in a press release, the implementation of blockchain for logistics management. Samsung SDS is the IT subsidiary of Samsung whose brainchild is the invention called Cello 3.0, which will use Artificial Intelligence (AI) and other logistics know-how to make supply management processes efficient. Kim Hyung- Tae, vice president of the logistics business division of Samsung SDS commented, "We will provide services to global e-commerce sellers with Cello Square 3.0, which combines cutting-edge IT with Samsung SDS global logistics operation experience". What is it all about? Can SMEs benefit from it? Let's learn something about the term "Blockchain".

**What is Blockchain?** Blockchain is a public register or database where transactions between users in a network are stored in a safe, secure, verifiable and permanent way. It can also be described as a transaction ledger; something where new information can be added, but the previous information, stored in blocks cannot be adjusted or changed. This is made possible using cryptography. The newly added block is connected to the block before it.

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Being driven by consensus, many computers are connected to the network. When an attacker tries to make any change to the blockchain, he will have to solve a complex mathematical problem. The solutions are shared with all the added computers; therefore, consensus means all the added nodes or computers must agree to the results.

Appending data to the ledger is decentralised as well, so that no single entity can take control over any information on the blockchain. Thus, we can rely on agreement by several entities. Blockchain is constructed in a way that contents can be easily verified with every data and change in data, clearly recorded.

**Need for Blockchain:** Centuries ago, commerce was local and supply chains rather simple. In the current scenario, it has grown complex and several attributes need to be considered before starting any business.

Location or manpower is no longer an obstacle and you will not be outlandish to demand IKEA interiors for a house in Surat. For businesses, managing supply chains and logistics is a rather complex task. Maintaining complete transparency becomes even more difficult with a multitude of stages involved in the current supply chains. In such a scenario, blockchain can do wonders and has been helping to transform the logistics industry. So far, it is majorly used by cryptocurrencies like Bitcoin. It certifies the transactions of cryptocurrencies between the parties, but this technology can be applied to various segments in businesses. It is said to be highly transparent and scalable with a chain of commands built within. The records cannot be deleted, making all the transactions safe and secure for future perusal, if required.

It is safety, scalability and security of Blockchain that has made its usage essential for the mechanics of Bitcoin. Forbes lists a study by Coindesk on The State of Bitcoin and Blockchain 2016 that ranked the managers who think blockchain is greatly profitable. Out of them, 77% are from finance, 54% are from securing identity and 38% are from securing title deeds.

How Can Small Businesses Benefit? Now the question is how small businesses can benefit from blockchain? How do we implement it to suit our business needs? What are its drawbacks?

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Implementing a new technology has never been easy, so is the case with Blockchain. Blockchain shows a great potential and can manage a huge amount of data immediately and safely by reducing operational errors and by simplifying information. Prior to this, there was no way to secure and validate data in a manner that is public and trust less. For example, taking license to gain access to software such as Microsoft, required trusting a single entity—its owner. Another example can be having a share in a company; it needs a lawyer, paperwork and the involvement of a regulated body, which can be eliminated with the use of Blockchain. The concept of Blockchain can also be helpful to food, energy and beverage sectors where it can be used for consumer protection. For efficient operations of supply chains, it can trace the origin of raw materials and the transactions of both the parties.

However, as easy it is to grow interest in a happening technology such as blockchain, it is important to understand its bandwidth. It may not be replaced where centralisation is required and where transactions need to be changed. One such example may be medical records which are regulated by a central authority and the information to be made public might not be feasible. This might be made possible by encrypting the information where only a few parties may be able to decrypt and understand the data. This may require Blockchain to further its limits to adapt to products and services that need to be served. Every technology evolves and adapts based on the needs of people and hopefully, this too will progress with the development of the ecosystem.