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## EDITORIAL

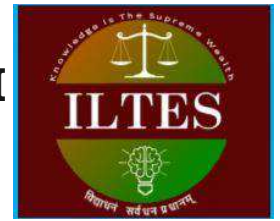
The last four months have been very hectic and rewarding for team ILTES. We have organised 1<sup>st</sup> **International Conference on Blockchain, Cryptocurrency and Digital Assets: Regulatory Framework on September 29-30, 2018 at Hyderabad**. Nearly 200 eminent experts and delegates from among 6 countries and India participated and presented their valuable thoughts on Blockchain Technology, its application and demonstrated the issues and challenges faced in use cases. Cryptocurrency and Digital Assets were also in the focus of the conference deliberations. All experts and delegates in their unanimous voice agreed that India should frame necessary policy and regulatory eco-system for best use of Blockchain Technology. Experts especially from Judiciary and Legal fraternity also advised delegates to avoid investing in cryptocurrencies, until proper regulatory framework is put in place in India. During this conference, the winners of **1<sup>st</sup> National Essay Competition on Blockchain and Cryptocurrencies – Global & National Perspective** were given the prizes and certificates. All delegates expressed great amount of satisfaction and felt that they are returning with rich knowledge and information about the new age technologies and legal challenges. Media, both Print and Electronic not only participated but gave wider coverage to this Conference deliberations. Post conference, ILTES has signed an MOU with National Law University and Judicial Academy, Assam- NLUJA at Guwahati. ILTES and NLUJA have jointly established India's first Centre on Blockchain Technology and Law, named as NICBLT. (Please visit the website [www.nluassam.ac.in/NICBLT](http://www.nluassam.ac.in/NICBLT)). The NICBLT is pleased to announce **International Conference on Blockchain technology, Crypto Assets and Regulatory Eco-system, CBTCAR- 2019 on April 20-21, 2019 at Guwahati**. More such Centres for Studies Research and Training are in pipeline in other parts of India. With the support of large number of stakeholders, state of Telangana, Assam and other Government agencies, ILTES is all set to create a world class Academy for promotion of Education, Training & Research in highly transformative and disruptive technologies with focus on creation of essential regulatory eco- system. ILTES wishes all fellow-beings and friends a very Rejoicing & Resourceful 2019!!!!

**Please note- Our Website is in the process of re-construction and shall be live shortly.**

**Prof. Dr. M.K. Bhandari**  
Chief Editor & CEO - ILTES



# NATIONAL LAW UNIVERSITY AND JUDICIAL ACADEMY- ASSAM NICBLT



An Initiative by National Law University and Judicial Academy, Assam  
In association with Infinity Law and Technology Educational Services  
~ Is Pleased to Announce ~

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## INTERNATIONAL CONFERENCE ON BLOCKCHAIN TECHNOLOGY, CRYPTO ASSETS AND REGULATORY ECO-SYSTEM (GLOBAL AND INDIAN PERSPECTIVE)

### CBTCAR- 2019

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**APRIL 20-21, 2019**  
**AT NLUJAA CAMPUS – GUWAHATI, ASSAM, INDIA**



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Let the birth of the New Year be the birth of our consciousness – The Mother



# International Conference on Blockchain, Cryptocurrency and Digital Assets: Regulatory Framework

September 29-30, 2018  
Hyderabad, India

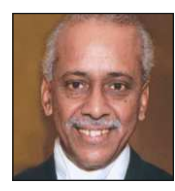
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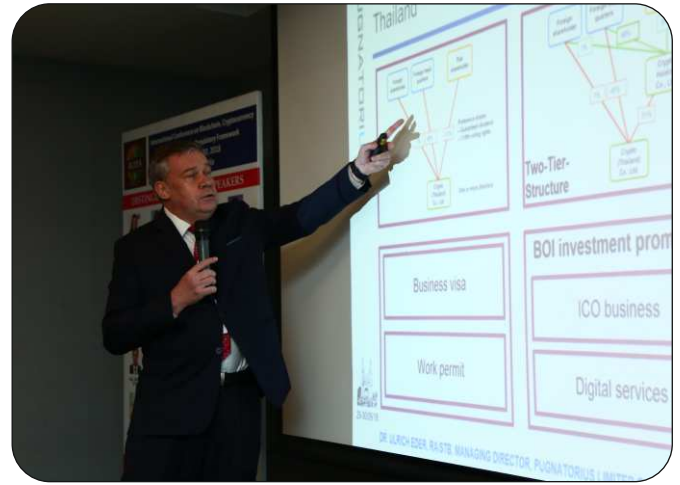


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# ILTES - INTERNATIONAL CONFERENCE ON BLOCKCHAIN - 2018



# ILTES - INTERNATIONAL CONFERENCE ON BLOCKCHAIN - 2018



The winners in the decentralised economy will be those who, drive supply chain transparency toward the most accurate network state possible – **Beltina and Tom**

## APPLICATIONS/USE CASES OF BLOCKCHAIN IN INDUSTRY



### PHANI AREGA

#### Senior Vice President, Engineering Zebi Data

This article is second of this series; The first article of this series published in the October 2018 Newsletter covered blockchain use cases Banking, Financial Sector and Insurance(BFSI), Supply Chain and Pharma industries. This article covers the use cases of blockchain in other sectors.

Real Estate has very strong use case of storing Land Registry (land ownership and transaction data) on blockchain. Given the high stakes involved there is lot of motivation for malicious players to come up with fake paper documents or tamper the land registry database thru malicious insiders to their benefit. This problem is prevalent in many countries. Storing the property transactions on blockchain provides a universally trusted source of truth that is tamper proof and solves the issue of fake transactions. This increased trust brings several cascading benefits: it makes more people to invest in real estate, increases no of real estate transactions in turn bringing more tax/stamp duty revenue to respective government. This also provides reliable ownership verification for financial institutions that issue loans against mortgaged property. So, interest rates come down and loan processing also gets faster.

Across the world following countries/regions had pilot projects underway for storing land registry data on blockchain: Georgia, Sweden, Brazil, State of Andhra Pradesh in India, state of Telangana in India, Cooks county in Chicago in US. Blockchain based Land Registry of Andhra Pradesh Capital (Amaravati) Region had already gone live and is in production now.

In the healthcare area, effective sharing of Electronic Health Records (EHRs) across hospitals has always been a challenge. Getting full details of the patient's history and correct order of events in patient's history tangibly affects treatment and prescription decisions of doctors. For patients that switched hospitals, one's EHR data is scattered across hospitals. These scattered pieces need to be merged in correct sequence and be visible to doctors that too after consent from the patient. To address this, researchers at MIT proposed a solution of Storing metadata and sequence information of EHR on common blockchain accessible to all hospitals.

Telecom sector also can leverage blockchain. To address the menace of telemarketing messages without consumers' consent, in Jul18, Telecom Regulatory Authority of India (TRAI) mandated that Telecom providers store consents and preferences of subscribers and list of all service, promotional and transaction messages on blockchain. This is a landmark step that may be emulated in other countries as well.

In education sector, the problem of fake degree/academic (paper) certificates is prevalent. There is also risk of malicious insiders tampering the academic scores in the university/college's database to someone's benefit. Storing students' academic records on blockchain and providing verification services based on that blockchain stored data will help a great deal. It helps the verification seekers get quick and reliable verification; API access fee gives a recurring revenue stream for the provider as well. The verification APIs can also include step of taking consent from the involved student.

In transportation and logistics industry blockchain helps in multiple ways. Per Minnesota Regional Transportation, in the transportation industry, daily payments of about \$140billion are tied up due to disputes. With the trust and transparency brought in by blockchain, no of disputes will reduce tangibly. And some payments can also be automatically executed by smart contracts on the blockchain. This results in faster payment disbursements besides saving administration costs. Paperwork is also significant in transportation industry especially in the international cases. Storing the documents in a common blockchain accessible to both transporters, their customers and regulatory bodies will save turnaround time and administrative costs. It is estimated that truckers drive about 29billion miles per year with empty/partial truckloads. The status visibility brought in by blockchain will help reducing this inefficiency. BiTA (Blockchain in Transportation Association) was formed by experienced technology, transportation and supply chain executives to create a forum for the development of blockchain standards and education for the freight industry

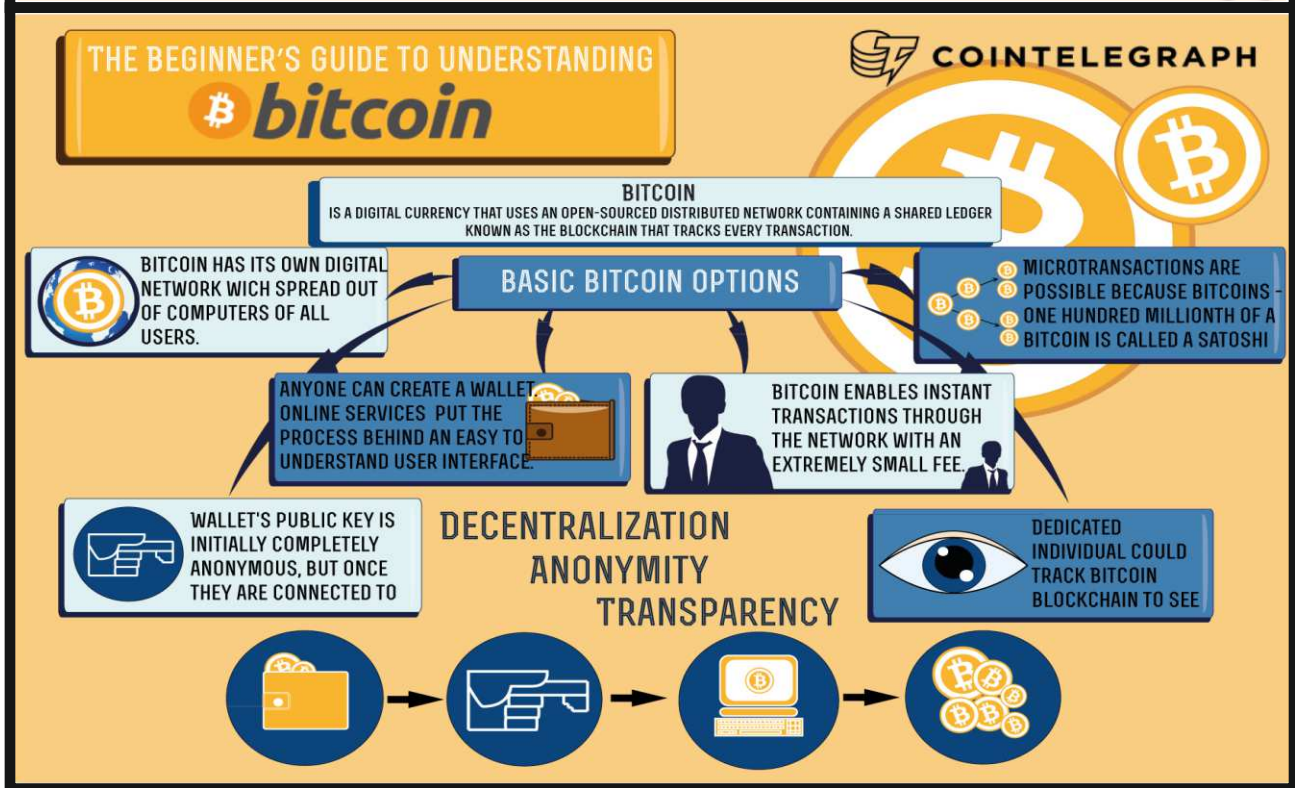
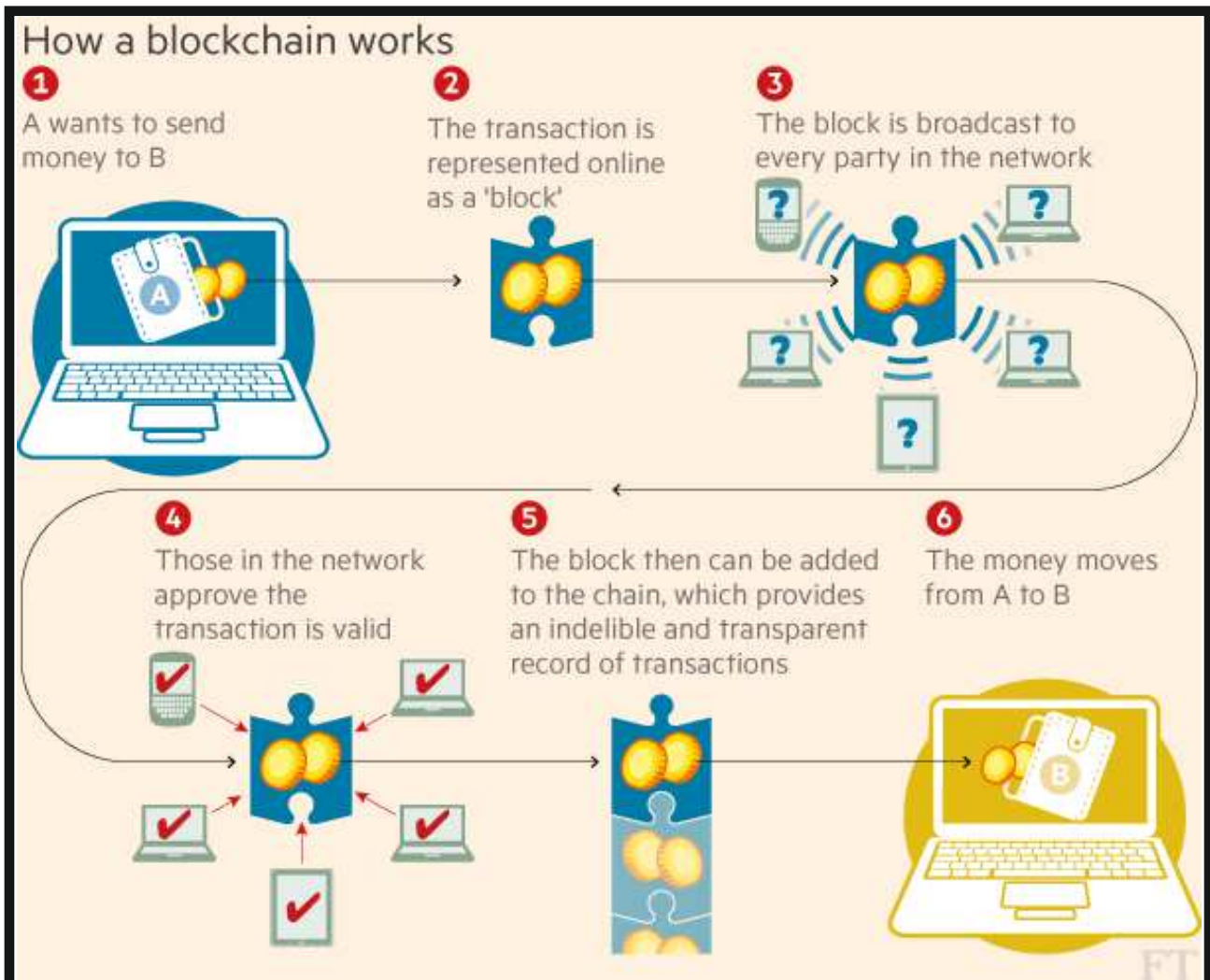
Digital Currency Initiative (DCI) of Massachusetts Institute of Technology (MIT) proposed the idea of Decentralized autonomous electric microgrids (DAEM). As a blockchain-and smart contract-governed system for managing usage rights, one that both internal users and external investor/lenders can mutually trust, a DAEM opens the door to affordable financing in situations where the parties to a loan would otherwise be reluctant to enter into an agreement at an affordable rate. Access to more cost-effective funds in turn empowers and incentivizes local households and businesses to invest in the modular expansion of the community's energy infrastructure to pursue local economic opportunities.

In retail industry, loyalty programs can benefit tangibly with blockchain. The current system of storing & redeeming points/miles in siloed centralized system of each Brand can be replaced with brand wise crypto tokens maintained on a common blockchain.

This makes liability calculation and tracking easy for Brands and provide more liquidity and convenience for customers. Tokens are not crypto currency but can be used to affect payment (transfer assets/value) from one account to another. In Ecommerce industry, blockchain helps in payment settlements to suppliers and in tracking consignments across different stages of the Supply Chain.

Besides enterprises, governments also benefit from blockchain. We already discussed the use case of land records above. Additionally, important government issued documents like passport, VISA, driving license, Birth certificate, voterID card can be stored in blockchain to prevent tampering of their database and fake documents creation. There are more use cases in addition to ones discussed in this and previous articles. And new use cases are being invented with time.

While blockchain technology holds lot of promise, there are some factors that are slowing down the uptake of this technology. Firstly, there is an awareness problem. In a survey by Deloitte around Apr18, it was found that about 40 percent of the senior executives have little or no knowledge about blockchain. And for some time, blockchain technology remained in the shadow of bitcoin which became notorious for providing opportunity to terrorists, drug traffickers and other unlawful players to conveniently and effectively transfer money. Since many are not aware of the distinction between bitcoin public blockchain and blockchain technology they were viewing blockchain technology also with suspicion. On the other hand, following factors are increasing up uptake of blockchain technology. IT giants have invested in blockchain and are spending on research for blockchain usage in industry. Hyperledger blockchain platform by IBM is an example. Across industries major enterprises also took initiative, formed consortiums to explore blockchain usage in their industry sector. Walmart for food Supply Chain, AIG for insurance, US banks teaming with R3 in 2015 which lead to development of Corda platform are some examples. Most of the blockchain technologies are opensource speeding up the addon inventions once base layer is created by some one. Across the world bunches of startups specializing on blockchain have started in last few years. This leads to innovation. Lagging are the academia and regulatory bodies. Academia needs to include courses that educate the students on blockchain, distributed ledger. It is not wrong on part of regulatory bodies to be reactive and play catchup because regulation (change of regulation) is always preceded by innovation and ensuing disruption. But governing bodies should catchup fast.



Watch Out: Our Next Issue For More Details: On Courses, Training & Events

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The human spirit must prevail over technology – **Albert Einstein**