Tech
Mahindra

ADDRESSING THE TELECOM CONUNDRUM OF FINANCIAL LEAKAGE: A BIOCKCHAIN PERSPECTIVE

BACKGROUND:

Revenue and Cost Assurance is the process to capture revenues and costs from end customers and original equipment manufacturer respectively. The process cuts through across multiple organizations, departments, people, and systems. This leads to multiple reference data captured in multiple systems by different stakeholders.

Traditionally any telecom operation runs through multiple disparate internal and external systems. Humungous increase in the customer base and the shift in the customer experience have put tremendous pressure on the operators to adapt to emerging technologies leading to financial leakages. These leakages happen owing to multiple organizations, departments, stakeholders, and systems. Primarily, the reasons of these leakages can be broadly classified as system issue or manual intervention. Billing that was a fairly simple exercise has become increasingly complex in nature.

This impacts the operators top and bottom line since they are unable to track and record the services. Currently, operators have revenue and cost assurance programs and teams to detect these leakages through the use of reference data created by multiple systems and process improvement methodology.

Blockchain is poised to disrupt this space as it ensures data quality and governance among multiple organizations and stakeholders in a secure and auditable manner.

CURRENT CHALLENGES IN REVENUE AND COST ASSURANCE:

System errors, unwanted human intervention, and poor communication among the stakeholders are the contributing factors to the financial leakages for the operators.

Broadly, there are three challenges:

Fallouts:

Fallouts are mismatches that occurs on rate, quantity, and amount leading to discrepancies in customer billing data and OEM invoicing data. Due to combination of these three parameters, the operator ends up paying more to OEM on invoiced data for the procured services and recognizes less than expected revenue on the billing data. This occurs as these data points are captured and modified in multiple systems and the data exchange between these systems doesn't happen. Additionally, there are lot of manual intervention that leads to manual errors with respect to these data points.

High Cycle Time:

Since the process depends on multiple stakeholders including Account Management, Order Management, Provisioning, Mediation, Billing, Customer Service, and OEM, and requires manual interventions as the systems are not integrated with each other, the process has high cycle time.

Data Disputes:

Since no single version of the data among the stakeholders exists, there are data disputes among internal and external stakeholders on the provisioning, invoicing, billing, and usage data. Multiple systems create multiple reference data compromising the data quality. There is data disconnect among these systems as they are exposed to manual intervention and errors. Since the systems are loosely coupled there is a delay in the data flow among these systems.

HOW BLOCKCHAIN ADDRESSES THESE CHALLENGES AND ENSURES NO LEAKAGES:

Blockchain enabled Effective and Efficient Revenue and Cost Assurance system will not only put the process validation as part of the smart contracts but also track and report the data discrepancies in real time.
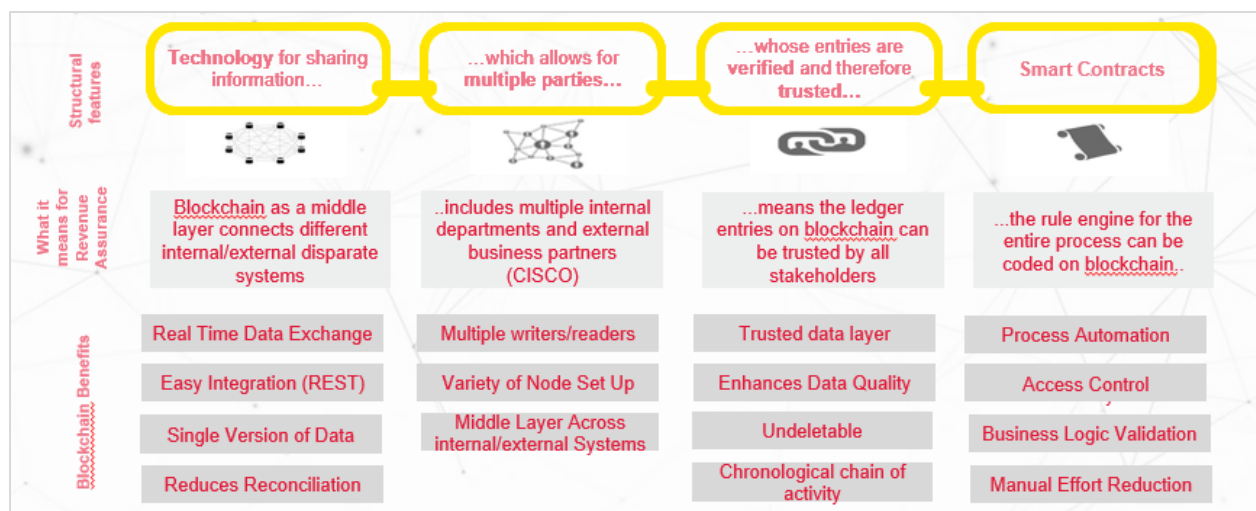
The four structural features of blockchain in the figure helps address challenges mentioned in the previous section.

1. Blockchain as a technology for sharing information

In the process, the fallouts are minimized as the three parameters including rate, quantity, and amount are exchanged in real time across multiple systems. It creates a middle layer among the legacy internal and external systems. Through REST API's it can be easily integrated with current application landscape. Since all stakeholders are connected by this common blockchain layer, it reduces the need for reconciliation on those three data points that create fallouts.

2. Blockchain as a technology for connecting multiple stakeholders

Blockchain connects multiple stakeholders by a single layer and enables real time data exchange. Depending on the To-Be state some stakeholders act as writers and some act as readers from the blockchain layer. Depending on the performance requirements and trust issues, it also offers variety of hosting options. Ideally, blockchain ensures trust in the multi node set up. However, organizations have options to choose from based on the requirements.

3. Blockchain as a source of trust

Due to multi-node set up, blockchain ensures that the trust is built among the stakeholders through the consensus protocol. It creates an immutable chain of transaction activity that cannot be deleted or modified by any stakeholder in the ecosystem unlike the traditional databases wherein the database administrator has all the rights. Hence, it enhances the data quality and governance leading to reduction of reconciliation and fallouts.

4. Blockchain as a platform for agreement

Smart contracts are one of the features of blockchain. These contracts are used to encode business rules governing the process. It automates several parts of the process leading to reduction in the cost of operation. On top of the public key cryptography, it also enhances the access control of stakeholders in the process. All business logic validation from quote to bill can be coded in smart contracts that are deployed on each node. So, all stakeholders who host a node would essentially be adhering to the process and business logic validation due to these smart contracts. It not only reduces the manual effort in the process but also ensures that data quality is not compromised by putting proper system validations and controls.

The Verdict:

Blockchain technology is a shared database that complements the current enterprise landscape of the organizations. For operators struggling with financial leakages both on procurement and customer side, blockchain is apt to address business & process challenges of disparate systems, manual intervention, and manual errors. Moreover, it brings in process efficiency leveraging smart contract feature of blockchain. Smart Contracts also ensures that the business validations prevent manual errors and financial leakages at the source systems itself.

_____

AUTHOR

Saurabh Arora Consultant, Tech Mahindra
Saurabh is responsible for Blockchain Advisory, Business Consulting, Technology Consulting, and Thought Leadership for Communication, Media, and Entertainment vertical of Tech Mahindra. His role is to advise clients in their Blockchain Journeys from Ideation to Implementation.

Tech Mahindra

www.techmahindra.com
connect@techmahindra.com
www.youtube.com/user/techmahindra09
www.facebook.com/techmahindra
www.twitter.com/tech mahindra
www.linkedin.com/company/tech-mahindra