Telecom Billing

The line of business in Telecom is essentially a billing centric business challenge. Any business deals with garnering money from customers and telecom is no special to that; however what is special in that is that every little CALL or action in this industry generates money that is revenue and data as well. This is a BIG Data industry in the sense that this is the data that generates data and revenue - fastest and in big volumes in any second round the clock.

Telecom billing is small unit-data churning business that pours in huge in any single moment and that is the challenge. Managing each of those small data in big aggregates and averages and yet accounting for every single DATA or CALL per subscriber and per call is a dialectical challenge no line of business has ever faced in human civilization. Added to this is the challenge that these data is not limited to any space or time, a person or a customer or a caller or a receiver is identified by a machine address - and that gives no comfort in handling the challenge of the business- data capturing through bill producing, verifying and revenue collection and creating customer profile.

The practical challenge that is grappling the industry and would continue to do so for any foreseeable future is the problem of fraud in Telecom usage by customers. Fraud in this industry means using the service without paying for it. Frauds can now be done in various ways than one.

- Thieves steal genuine customers' gadgets, use them heavily for a short term, destroy the SIM or the gadget and meanwhile the genuine customer reports for a stolen gadget- no one ends up paying while the bill that is racked up is huge and a simple case of write-off.

- Agents buy up a chunk of subscriptions and impose rules and appropriation rules that do not corroborate the rules of the ISP. After some time the agent declares bankruptcy, winds the operation and simply vanishes in thin air. The ISP has to eat up the entire loss.

- Consumers subscribe with faked identities and after a short period of regular usage are nowhere to be found.

- Other scientific methods to hack the call-list in the database of the ISP.

- Ingenuous and innovative hi-skilled frauds take place through finagling the software within the gadget and redirecting the calls through a different number and that number later vanishes.

- There are methods of fraud at different hub levels - these are done through organized and orchestrated manners.

The frauds of different types do have standard procedures to curb but only to some extent of mitigation and becomes impossible for any mass distribution and service company to eradicate. A standard rate of lowest possible fraud mitigation is no less than 5 to 6% of the usage. Achieving a success rate of 2 to 3% is only possible through Big Data handling data analytics tool that can handle huge aggregate data in the most flexible and fast way at any level quite independent of other analysts. The cost of reducing the fraud rate beyond that level falls below the optimum price-performance ratio of the cost involved.

Frauds of organized and consorted level are detected in course of time and do take a series of managerial preparation and chain process in resolving them. Frauds of individual nature of a regular pattern do take their own time in detection and have been solved successfully and the methods are time tested. Frauds of individual nature and yet random in pattern are extremely difficult to detect within a pay period and even across some periods.

The Fraud detection methods are mostly heuristic in nature and are not so time tested and goes mostly by the whims , hunches and some idiosyncratic wisdom, their random and unregulated nature of detection and mitigation gives rise to a completely wild and un-regulated pattern of revenue salvage.

The service a business analyst tool can provide to this industry is to find a regular pattern of usage per customer, per call and then look out for known outlier elements. This has been the regular methodology of ISPs in fraud management. In the face of hi-tech fraudsters this method hardly gives any good result and is even counterproductive because of the risk of a regular fraud pattern. If the fraud pattern survives the sudden and occasional checks and takes up a regular pattern then there is hardly any measure or method to detect that. A customer would think he is rightly charged but a fraudster would impose upon the customer a small and differential regular pattern. The fraudster would then impose these small pluses on many un-attentive eyes and would reap a big profit at the cost of both the company and the customer. The customer would not know what happened and would eventually leave the company and go for another- the ultimate loser would be the actual service provider.

A good Data analytics tool would immediately calculate out the allowable spectrum of per call usage or a general total usage and can warn the customer for any outliers. This is a very good help to all concerned and would mitigate the fraud to a very large extent.

A good tool however can thus head towards developing a general empirical model of usage per target group. The measure can be published and appropriate billing measures can also be proposed to the customer. These alarms really work wonders and the customers would be cautious about any extra or under usage. Thus a good data analytics tool can very well act as a general data usage average for a space, time and target group allowing the ISPs to allocate their resources to distribute their investment to achieve the optimum profit. - This feature had hitherto been unutilized and now is being used almost by every transnational big players in the telecom sector.

Analysis per type of fraud in different territorial region would do a very good industry serving profile-mapping of customers and agents and would serve as a standard map-cum-model to the new players - a common and extended to particular market research map is obtainable through a good Data Analyst tool!

We would not know what kind of fraud would be in the offing or would crop up in the near future through technological wizardry, but if we are prepared with a flexible tool independent of pre-conceived models then we would tread long way to the cherished destiny of reducing the fraud to the irreducible minimum level and would keep it at that absolute low level even when the volume of operations are increasing.

There is a big challenge during the time of capacity building. Companies do not build up their capacities at a regular pace progressively, they build it up in slots at intervals that may or may not have a regular pattern and yet would be mostly demand driven and driven by cracking through new pastures or new territories. That is the time when the frauds shoot up not only in those specified areas but also across areas because the billing system is centralized and related. But with the regularizing of the operations and progressive stabilization the fraud rate may not decrease down proportionately- this is challenge of add-on capacity building in stages. Exporting systems across different target groups or territories may not be always fraud-proof. They have their in-built problems associated. This needs to be tackled only through a good, flexible and fast Data Analyst tool that can deal with Big data in small time and small preparation! This is one such case where high-flying high-finesse highly expensive solutions do not provide the best of the results and calls for handy and effective personalized tools that can help and sharable within groups. The beauty is in ease and efficacy - in handling Big in the smallest possible time and effort!

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