

Detailed Record Keeping and Analysis – Key to Developing a Fully Sustainable Business Model for Telecoms Companies

a report by

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The telecoms industry needs to adapt a philosophy of full and comprehensive processing of its transaction records if it is to gain the benefit of the new products that it is developing. Likewise, telecoms operators must use maximum analysis of its new content providers and new services to extract the best margins and the best product mix for the future.

The reality at the moment is that many operators use a limited percentage of their records and so businesses are functioning partially blinkered. The business is not able to completely answer questions on fraud, gross margin, margin contribution, revenue assurance, billing reconciliation, interconnect settlement or best cost routing because legacy subscriber systems and second-generation interconnect settlement systems are designed to delete a wide range of records too early in the processing cycle.

Why do operators choose to limit the amount of transactions they will process – when the disadvantages are clear for all to see?

The larger the network event transaction count, the greater this problem will become and the transaction count will inevitably get bigger, much bigger. A number of factors will contribute to this surge in transaction volume. A recent investment report on communications software cited four key reasons that are driving the increase in billing volumes for telecommunications. They were: subscriber line growth, increasing usage, introduction of new features and bundling of services across networks.

These factors and more apply to the increase in growth for the mobile business. Here, the operators are wrestling with content, usage billing and billing for quality of service. For those in the content/service business, be it 2G, 2.5G or 3G, there is the new challenge of dealing with several hundred, soon to be (hopefully) thousands, of content providers.

This sudden and inexorable change in volumes exposes current processing philosophy as a second-generation solution to a third-generation problem. At a time when operators need a 100% view of their

transaction world, what do they receive? For many, their subscriber billing systems give a much reduced view of the overall transaction picture. This is due to pressures on billing cycles, original mediation processing views and the relief afforded by the large-scale take-up of prepaid systems. The downside for the operator is that in filtering records they filter data and in filtering data they filter value.

The International Data Corporation (IDC) estimates that over 70% of total revenue leakage occurs in mediation/data collection/rating/billing. If you are only looking at , for example, less than 50% of the records, how can you ever get the data to resolve the revenue assurance problem?

When the stream of billing records has been filtered from the total available, only fractions of the original record stream remain. Why is this abbreviated style of processing still being allowed to persist when the potential for error and missed revenue is so high and when the ability to investigate or analyse is almost eliminated prior to any analysis taking place?

Operators continuing into the third millennium with 2G processing systems that are not capable of processing either the volumes or the complexity of the currently emerging telecoms products are taking grave risks.

Some are trapped by old investment ideas on system scalability. New 3G subscriber billing and interconnect billing systems can scale-in measured, convenient increments to suit any operator. In addition to this scalability is available in both hardware and software. Oracle9i, for example, supports a form of massive parallel processing that can couple any group of processors – Intel, Sun, IBM – together to achieve very large-scale processing loads, at a fraction of early 1990s costs.

Some operators are yet to make the transition to efficient, flexible mediation platforms. This is the starting point for change, bringing systems into production that can change, process and change again at a pace comparable with the product-change-speed in the modern telecoms industry environment.



Other operators are seduced by the idea of lowering the costs of hardware by reducing the transaction load. In itself, sound business practice, but when pushed too far means savings of thousands of dollars in hardware disguise, millions of dollars of losses in revenue assurance, fraud or uncollected interconnect billings.

More and more telecoms operators need to continually bring their processing capabilities to focus on measurement of inputs, measurement of outputs and the detailed analysis of all the events occurring in between. No major industry in the world throws away such large amounts of operating data as the telecoms industry.

It is the author's opinion that only one system in the organisation has the capacity and the analysis capability to undertake the task of properly processing 100% of all network event records, gathering the data so it can be utilised for study by other systems and functions and, at the same time, complete its own unique processing requirements. This system is a properly installed, modern, third-generation interconnect processing system.

By comparison, second-generation interconnect processing systems rely on mediation devices to classify call traffic and events. This characteristic of second-generation interconnect systems slows down processing and utilises the mediation device to filter substantial records in the same way as a subscriber billing system to gain reasonable throughput.

Third-generation interconnect systems are capable of enormous throughput of real records, not just fancy 'benchmark' volumes. They reduce operational requirements as they have no need to attach filtering mechanisms from a mediation device. In contrast, third-generation interconnect systems can utilise a mediation device to its maximum potential. To assist in record translation from a number of sources to one, check record integrity and provide verifiable data collection. They do not

need mediation devices to delete or filter records or classify traffic.

So, a third-generation interconnect billing system can be utilised to provide many of the answers to processing 100% of the transactions through the network. It will have the volume capabilities to cope with the highest workloads without extensive filtering. It will be able to collect, rate and categorise 100% of traffic (probably of the first time) and deliver that traffic to a data warehouse or other suitable repository, or multiple repositories or report directly in any detail.

It will be able to provide the only repository in the operator support system/business support system environment where there is absolute certainty of finding all records/all of the time.

Third-generation systems for interconnect processing have only emerged in recent years but they will bring great value. The 'value in detail' to those operators looking for total understanding of their traffic. The massive changes in the telecoms product landscape when moving from interesting and simple to daunting and complex defy the use of anything but 100% processing systems.

Operators looking at less than 100% of transactions cannot very well complain when their business is running at less than 100 % efficiency. ■

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