



Actionable intelligence: The next frontier in telecom OSS/BSS

Communication service providers (CSPs) have long talked about achieving better 'business synergy' through greater cross-departmental co-ordination and sharing of data. Unfortunately, says Dr Hossein Eslambolchi, 'synergy' never seems to get a high enough priority.



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Historically, different departments in a CSP – finance, billing, marketing, network engineering – have built or bought their own systems, with little thought as to how to share data and make it truly useful across the organisation. However, CSPs today are realising that they cannot continue to operate in this way, as it puts them in danger of falling behind at a time when the telecom business is changing so radically.

Not only are telecom margins getting thinner and the list of competitors growing, but the sheer number of services and the way those services are being offered has exploded. Plus, many of the services, such as content, are off-net services that the CSP neither owns nor controls. In short, it's much tougher to understand the bottom line impact of decisions on purchasing, third party partnering, prices, discounts, offers, network build-outs – even customer support policies.

Little business monitoring

Now telecom departments certainly know that greater co-ordination and better data exchange would help, but each is saddled with its legacy data and processes. What they lack is an internal data currency and mechanism for monitoring business performance.

Yes, they can roll up performance data at a macro level to produce a quarterly report for stockholders, but as they say, 'the devil is in the detail'. The most valuable intelligence here is not the macro intelligence provided by existing DW/BI systems, but actionable intelligence – the ability, for instance, to look at the revenues and costs associated with individual subscribers, business customers, or products.

Without that low level of detail, business decisions about the prices, offers, and markets for a niche telecom product or service are mostly guesswork. Why? Because no granular data ►



exists on which to base an informed decision.

Not only is the kind of intelligence important here, but also the timeliness of it. Because DW/BI systems typically run in an offline mode for analysis and reporting purposes, they are not meant to provide intelligence in an operational time frame. CSPs are finding that expecting this of their existing DW/BI infrastructure is like asking an elephant to dance – they're just not built for that purpose.

Thousands of data sources

Therefore, having the right software platform is critical, because it will need to aggregate and correlate data from hundreds, if not thousands of data sources. In addition, it needs an ability to collect, classify and roll up data records into a robust hierarchy in near-real-time. It also needs to be able to:

- Apply different types of business logic to this data, depending on the specific business problem to be solved
- Run automated analytics on this data, to identify micro trends which are operational in nature
- Present the information so gleaned in a manner that business users can make sense of it and 'play around' with it (to do what-if analyses, for example)
- Provide the CSP with a mechanism to act on this intelligence – trigger actions on this information, and to track such actions to closure.

Once the above is in place, it can be used to solve a variety of business problems that CSPs are facing today. Possible applications include:

- Computing the propensity of customers to make inbound calls to the call centre. If a CSP can identify this, and get a view of why certain customers are likely to call the call centre, they can potentially save millions of

dollars in call centre costs by proactively reaching out to these customers using a cheaper mode of communication (an email, for instance).

- Giving CSPs granular visibility into their profit margins, such as margin by customer or customer segment, by product, by geography, etc. This information can be critical in making multiple business decisions – for example, how to respond to a price cut by a competitor? Or which customers to focus on most for retention policies?
- Monitoring the performance of new products, such as actual versus anticipated uptake goals. This can include analysing trends in the outcome data to predict deviations before they occur (such as margins not succeeding in the future, even though they are on track today). Also, by carefully tracking, in near real-time, a number of metrics related to service delivery, CSPs can ensure that roll-out problems can be readily detected and repaired pre-emptively, before they negatively impact the customer experience.

One company that identified this impending crisis before others is Subex. And the solution they have been recommending to address it is the ROC. The ROC, or Revenue Operations Centre, is a vision that a CSP can monitor their business through a virtual operations centre analogous to the NOC, or Network Operations Centre.

While a NOC monitors network performance across specific nodes, regions, and layers, a ROC monitors business performance by analysing data that resides across a host of B/OSS systems from billing and provisioning to customer care. 🐘

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- Dr Hossein Eslambolchi, Subex Ltd

VanillaPlus
Jargon Buster

BI = Business Intelligence

B/OSS = Business / Operations Support Systems

DW = Data Warehousing

About the author

Dr Eslambolchi is currently the Chairman of 2020 Venture Partners and the Advisor on Strategic Matters at Subex Ltd. In addition to serving as AT&T's CTO from 2000 to 2005, Dr Eslambolchi was President of the AT&T Global Networking Technology Services, President and CEO of AT&T Labs, and Chief Information Officer during his 19 years with the company.

Dr Eslambolchi led the transformation of AT&T's network, systems and services. Called "a bold, pragmatic visionary" by **Business Week Magazine**, Dr Eslambolchi holds 1,026 patents (431 issued and 595 pending). He has won numerous awards, including the AT&T Science and Technology Medal.

Dr Eslambolchi is also the recipient of a number of awards and honours that include: "Inventor of the Year" by the New Jersey Inventors Hall of Fame – apparently, only Thomas Edison and Albert Einstein were similarly honoured; "Top 25 Most Influential CTOs of 2005" (InfoWorld); named by Cisco IQ Magazine as "One of its 10 Internet Business Leaders"; "One of the Premier 100 IT Leaders for 2004" (Computerworld Magazine); "Number 1 'mover and shaker' in telecommunications", for his visionary prediction of IP and MPLS worldwide nearly a decade ago (*Light Reading*).

He is also a member of the Board of Trustees for SUSMA based in NYC and technical advisor to University of California School of Engineering where he started a centre called CNS, bringing together various engineering disciplines including nano-engineering fields. Dr. Eslambolchi earned a BS, MS, and PhD, (Phi Beta Kappa), in Electrical Engineering from the University of California, San Diego.