

Guavus: Powering Innovations in Big Data Analytics

As the communications service provider (CSP) community is working towards stretching their network capacity and coverage to provide better customer experience and move to 5G – they need innovative, real-time analytics in order to drive success and deliver exactly what their customers need and exactly when they need it.

This is where Guavus plays a critical role with its Guavus-IQ big data analytics portfolio which helps CSPs get business-critical 'outside-in' and 'inside-out' insights on customer experience and network operations. As part of the Disruptive Telecoms report - Alex Shevchenko, CEO of Guavus, speaks with Zia Askari from TelecomDrive.com about Guavus' key priorities today and why Big Data Analytics is going to play an even more critical role for operators and their customers in 2021.

What are the key priorities for Guavus today?

Our primary focus is on what we call 'outside-in' and 'inside-out' big data analytics for CSPs. We focus on two main aspects.



We help our customers to analyze in real-time how each of their subscribers is experiencing their network and services (bringing the outside perspective in) and how their network is impacting each of their subscribers (how their internal operations are impacting each subscriber). And we do this in a highly correlated way. Our Guavus-IQ portfolio is based on these two main pillars – Service-IQ, providing analytics on subscribers and devices, and Ops-IQ, providing analytics on network operations.

How important is Big Data Analytics for CSPs?

I think it is extremely important and we are in the midst of accelerating demand for analytics. Our industry has been talking about the digital transformation – the need for this transformation, the new technologies, the dawn of 5G in the telecom market – and then all of a sudden we have this pandemic, which is obviously a terrible thing but has managed to have a huge impact on the acceleration for digital transformation. The behavior of users has been changing significantly throughout 2020 – it's not just about the growth of GBs being consumed by all the people now working from home, it is a total change in user behavior. So CSPs have to deal with many more data requests, much higher demand for their services, and demand for higher SLAs. And in this new scenario, being able to look ahead and serve these changing user needs (vs. reacting later on) is what is going to differentiate the successful service providers from other. It means that as a service provider you need to react in real time to the changing patterns of your users' behavior, and on the other hand you need to intelligently deal with a dramatically increased load on your network. In both cases, we're already facing the threshold

of the human capacity to do all that and that's where you definitely need the machine to help you. You need to have the most modern way of analyzing data in real-time – and make real-time decisions based on that data and to have systems that are self-evolving-- that's where AI and Machine Learning (ML) come into play.

How is Guavus driving more value for CSPs from this data revolution using AI and ML?

With this increasing demand in both the number of new services provided as well as higher SLAs -- driven by the pandemic, 5G and digital transformation – there is increased demand for more advanced insights on user behavior and reacting in real time. Our portfolio is ideally poised to serve these needs.

With our software, we are helping our customers, some of the leading CSPs in the world, to improve their customer experience by applying AI-based analytics to better understand on how each individual user of their network is acting and quickly react to the changes in their behavior. We provide the highly correlated 'outside-in' insights on their user experience and the 'inside-out' insights into the how their network operations are impacting each customer. And our solutions help their customer care, marketing and other teams take quick and automated actions, grouping dynamically the users of the network and taking immediate actions to improve and steer their user experience. Our technology allows our customers' networks to 'self improve' over time – increased data on user behavior enables more precise advice and actions, and ultimately a better user experience.

With the huge increase on the load of their networks, trying to meet enterprise-grade user demands and a more complex 5G infrastructure, operating networks become a lot

more complex. At the same time, the readiness of users to pay more is not there and that becomes a P&L trap for CSPs – where cost is increasing higher than revenue. Not only finding new revenue sources but more fully optimizing the network are critical. That's where our Ops-IQ comes in – it analyzes the patterns of network behavior and all the data processed, detects anomalies, identifies root issues, and triggers action that target real issues -- or prevents and anticipates issues in the future. It focuses maintenance of the network on the right aspects, thereby reducing maintenance needs. All this leads to a decreased costs for operators.

How important is India as a market for Guavus?

The Indian market is extremely important for us, both business-wise as well as for our operations. We have a large R&D site, delivery teams, and a number of data scientists located in India.

India is the largest of three key office locations for Guavus worldwide, and our Indian site is the fastest growing. It is a great market for engineering but also for data science; we've seen a growing number of very high-quality data scientists in India.

And from the business side, India is one of the largest telecom markets in the world. The number of users is amazing. And India is a growing market for IoT, another big area of focus for us and our parent company, Thales.

There are also other initiatives which are not directly linked to telecom but where we have a presence through our CSP customers and through Thales. Vertical industry initiatives like smart cities, healthcare, and the utility business also have big potential for us because we are investing in technologies to enable preventive or 'smart' maintenance for any industry which requires telecom services.

What are some of the innovations or market disruptions that we can look forward to from Guavus in the coming months?

I will speak about the three main groups here. First, we will keep on implementing new use cases for our AI-based analytics portfolio for CSPs. Guavus-IQ has a strong roadmap and we will be rolling out a number of new products over the coming months. We've been working with our CSP customers on a lot of new use cases for subscriber analytics, network optimization, and many others.

Our products are tailored specifically for CSPs. There are plenty of analytics solutions targeting the enterprise market, and they're

doing a good job at it. But with any generic or horizontal solution, they will have some weakness for CSPs – operators' needs are very different than most enterprises, and their networks much more complex and handling far greater data volumes. We've been solely focused on the providing analytics to the telecom market for 14+ years now. We continue to work with our telecom customers and know them better than most in the market, and together come up with new analytics use cases that drive new business and reduce costs.

The second key area for us is the Cloud. We recently announced the next phase in our relationship with Amazon Web Services (AWS). We have implemented our Guavus-IQ solution on AWS so that customers who use Amazon cloud services can easily plug-in the subscriber and network analytics into their solutions. It is important for us to not only be cloud-enabled but also to be cloud-native. So you'll see us announce

more developments and partnerships in this space in 2021.

And the third key area of innovation for us is in 5G – AI-based big data analytics is core to 5G network design. It's no longer a nice-to-have, it's a must-have. It's critical to addressing the increased complexity



and volume of data that comes with 5G. We are going to play a pioneering role in this space. We are already investing in having a dedicated offer for the Network Data Analytics Function (NWDAF), being defined as part of the 5G Core (5GC) architecture standard by 3GPP. So that when CSPs design their 5G networks, they don't have to struggle with how they are going to implement the analytics and how they are going to build system elements plugged into the analytics.

These are some of the key areas where we're going to innovate and offer new products in 2021.

What are some of the top trends in Big Data Analytics you expect to see in 2021?

I think CSPs will face an increasing challenge with user churn because there is a clear digitization of the user journey and users working from home still want enterprise-grade services.

So this means that users will look for better services and operators

who can provide these services. And, hence, operators will face this as a challenge to contain this churn and at the same time be able to react quickly and deliver the right service to their users – before they go to their closest competitor.

And it is not only about digitization, it is also about having the ability to react in real-time. With the growing amount of data to deal with, more people working from home, accelerated digitization, and 5G -- CSPs cannot simply add more staff to deal with it all.

The leading players in the market will have to put the analytics through all the pillars of their business – and use analytics as their eyes and ears to be able to operate their networks and address all the challenges. There is also the need for real-time analytics in the cloud. All the products and solutions will have to be cloud-native. And there is this trend of integration with 5G standards within the telecom market.

Service providers will have to add more dimensions to their business and their offerings. They are already addressing various enterprise verticals like healthcare, automotive, transportation management, utility management...and I think this trend will increase in 2021.

And this will bring more convergence between IoT and less digitized industries and telecom. That is where CSPs need to have better analytics solutions that can allow them to work with their own telecom data but also work on data coming from each of the enterprise industries. We'll continue to work closely with Thales, a leading IT provider in many of these vertical industries, to offer innovative analytics solutions.