Network intelligence enables greater efficiency, automation

By Indranil Das

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Next-generation technologies are upon us, and as networks evolve to accommodate for them, network intelligence will become a necessity.

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In the midst of a global digital transformation, widespread integration of next-generation technologies like 5G and IoT is just over the horizon. As these technologies become more prevalent, demands of the networks supporting them will grow and evolve in the same stride, necessitating an increase in network complexity and capacity to boot. In order to capitalise on these trends and the new revenue streams they present, and to handle the complexity of diversification at the same time, networks must become scalable, intelligent, and automated.

Network intelligence and automation are crucial to the evolution of 5G, IoT, and industrial digitalisation on every front. As 5G-enabled technologies develop, operators will need to increase their network capacity – but with additional capacity also comes additional complexity. To meet these new challenges, operators must introduce engineered solutions that combine machine learning and human intelligence to enable networks to self-learn, self-optimize, and deliver an optimal user experience.

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The complex reality of today's telecommunications systems will only accelerate further with the introduction of next-generation technologies. Machine Intelligence, using machine learning and other AI technologies, is vital to handling this complexity with more efficiency. As such, engineered network intelligence gives operators the ability to scale-up and automate operations in parallel with the growth of their network, resulting in significant performance and efficiency advantages.

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In achieving network intelligence, Machine Intelligence must first be implemented from multiple angles. Machine Intelligence, which combines the strengths of Machine Learning and Artificial Intelligence, offers a means of reinventing network operations and redefining the operator product portfolio to create new business opportunities in 5G and IoT. It will enable algorithms to predict traffic patterns and dynamically put cells into dormant mode without impacting user experience; it will help prevent future malfunctions my providing actionable recommendations and reducing dispatches of service technicians; it will enable detection and optimisation in analytics, drastically reducing customer service calls; and much more.

Not only does Machine Intelligence improve network performance, but it also substantially increases efficiency across the board. With automation and domain-specific AI, the intelligence built into the network platform provides superior performance while optimising the use of scarce radio network resources. As such, Machine Intelligence solutions can help operators provide the highest performance and the most seamless and intuitive network operations for customers.

In line with this, Machine Intelligence, pioneered by Ericsson, the global ICT provider, facilitates the creation of intelligent networks. Ericsson recognises that the time to implement a smart approach to 5G-enabled technologies has arrived, and the operator has been working to engineer network intelligence that provides new levels of efficiency and performance. By way of network intelligence, network services will be twice as easy to deploy, field dispatches will be reduced by up to 30%, and required field instructions will be accessible in under one second. Further, inter-frequency handover of network products will happen twice as fast, OPEX for future RAN transport will be cut in half, and energy consumption on the node level will be reduced by 10%.

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Operators need engineered intelligence to handle the coming paradigm shift. As businesses continue to adopt next-generation technologies, the demands placed on networks will shit, creating an opportunity for the operators that can most as fast as their fastest customers. If they can switch to a continuous improvement process in an increasingly complex world, they will stand to win entire industries. At present, this journey has just begun – but it accelerates with every passing day, requiring operators to disrupt the status quo by providing leaps in efficiency, speed, and customer experience.

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