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SON (Self-Organizing Networks) in the 5G Era: 2019 – 2030 – Opportunities, Challenges, Strategies & Forecasts

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Abstracts

SON (Self-Organizing Network) technology minimizes the lifecycle cost of running a mobile network by eliminating manual configuration of network elements at the time of deployment, right through to dynamic optimization and troubleshooting during operation. Besides improving network performance and customer experience, SON can significantly reduce the cost of mobile operator services, improving the OpEx-to-revenue ratio and deferring avoidable CapEx.

To support their LTE and HetNet deployments, early adopters of SON have already witnessed a spate of benefits – in the form of accelerated rollout times, simplified network upgrades, fewer dropped calls, improved call setup success rates, higher end-user throughput, alleviation of congestion during special events, increased subscriber satisfaction and loyalty, and operational efficiencies – such as energy and cost savings, and freeing up radio engineers from repetitive manual tasks.

Although SON was originally developed as an operational approach to streamline cellular RAN (Radio Access Network) deployment and optimization, mobile operators and vendors are increasingly focusing on integrating new capabilities such as self-protection against digital security threats, and self-learning through artificial intelligence techniques, as well as extending the scope of SON beyond the RAN to include both mobile core and transport network segments – which will be critical to address 5G requirements such as end-to-end network slicing. In addition, dedicated SON solutions for Wi-Fi and other access technologies have also emerged, to simplify wireless networking in home and enterprise environments.

Largely driven by the increasing complexity of today's multi-RAN mobile networks –

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including network densification and spectrum heterogeneity, as well as 5G NR (New Radio) infrastructure rollouts, global investments in SON technology are expected to grow at a CAGR of approximately 11% between 2019 and 2022. By the end of 2022, SNS Telecom & IT estimates that SON will account for a market worth $5.5 Billion.

The “SON (Self-Organizing Networks) in the 5G Era: 2019 – 2030 – Opportunities, Challenges, Strategies & Forecasts” report presents an in-depth assessment of the SON and associated mobile network optimization ecosystem, including market drivers, challenges, enabling technologies, functional areas, use cases, key trends, standardization, regulatory landscape, mobile operator case studies, opportunities, future roadmap, value chain, ecosystem player profiles and strategies. The report also presents revenue forecasts for both SON and conventional mobile network optimization, along with individual projections for 10 SON submarkets, and 6 regions from 2019 till 2030.

The report comes with an associated Excel datasheet suite covering quantitative data from all numeric forecasts presented in the report.

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8.42 Datang Mobile
8.43 Dell Technologies
8.44 Digitata
8.45 D-Link Corporation

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8.46 ECE (European Communications Engineering)
8.47 EDX Wireless
8.48 Elisa Automate
8.49 Empirix
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8.70 HCL Technologies
8.71 Hitachi
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8.74 InfoVista
8.75 Innovile
8.76 InnoWireless/Qucell/Accuver
8.77 Intel Corporation
8.78 InterDigital
8.79 Intracom Telecom
8.80 ip.access
8.81 ITRI (Industrial Technology Research Institute, Taiwan)
8.82 JRC (Japan Radio Company)
8.83 Juni Global
8.84 Juniper Networks

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