



GILAT BLOG

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Ensuring Connectivity Across Sub-Saharan Africa with Cellular Backhaul

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By On Sobol, Europe Sale Director at Gilat Satellite Networks

There is Good News and Bad News

According to the GSMA, which represents the worldwide mobile communications industry, Sub-Saharan Africa has significantly reduced its coverage gap for mobile broadband over the past several years. However, according to a recent report, it remains the region with the largest coverage gap. The GSMA defines this gap as people living in areas not covered by a mobile broadband network.

The GSMA reported that the coverage gap went from 50% in 2014 down to 19% in 2020, but this is still more than three times the global average of 6%. While this is remarkable progress, the coverage gap in Sub-Saharan Africa remains the highest globally; the region is home to 67% of the world's population that are not covered by mobile broadband. A key concern for reducing the gap is that the deployment of new sites in sparsely populated rural and remote areas is a significant economic challenge, as it can cost up to twice as much to deploy new base stations in rural areas than in urban ones, and can be three times more expensive to run.

To address these concerns, cellular backhaul over satellite is proving to be the best solution to rapidly and efficiently expand a cellular network to rural areas, thus answering the need to bridge the digital divide and satisfy the growing demand for connectivity.

The Growing Case for Cellular Backhaul over Satellite

In fact, cellular backhaul has, in recent years, been identified as one of the fastest-growing satellite application sectors, prompting satellite operators and service providers everywhere to expand their awareness and capabilities in these areas. A main factor driving this growth is the demand for internet connectivity increased exponentially during the pandemic and continues to remain at higher levels than before the crisis; China saw a 30% increase in the number of hours per device spent on mobile data usage and in Italy the figure was 11%. And it's not just internet access that has seen these increases. The use of voice services has also increased considerably, as people strive to keep in touch with loved ones and friends. There has also been an increase in the use of broadband data so people can see each other and not just hear each other: think Zoom for both business and pleasure.

Connecting the People of Africa

Africa Mobile Networks (AMN,) Africa's largest satellite cellular backhaul network, builds mobile network base stations serving rural communities in Sub-Saharan Africa. In this context, AMN is playing a key role in improving the commercial feasibility of rolling out mobile internet broadband networks.

AMN's technology combines low power and solar BTS transmitters with VSAT satellite technology directing traffic onto an existing network and using solar panels to power the systems. At the core of AMN's vision is the use of highly advanced technology to enable services to be delivered more economically and sustainably to smaller communities than has ever been previously possible. AMN is bringing 2G, 3G and 4G voice and data connectivity to towns and villages which have previously been unconnected.

In order to achieve their goal, AMN selected Gilat to provide over 2000 SkyEdge II-c Capricorn VSATs and to participate in plans of site migrations from 2G/3G to 4G, as the requirement for data communication rises.

The SkyEdge II-c Capricorn family consists of high-performance VSATs ideal for vertical markets that demand high throughput and high-speed services, such as corporate networking, 3G and 4G/LTE cellular backhauling, IP trunking and mobility. Designed to work with high throughput satellites, Capricorn's adaptive transmission technologies maximize performance, improve service availability and reduce operational costs.

Gilat's technology and deployment protocols ensure that AMN can deliver a reliable service, unaffected by weather conditions or sabotage. The ruggedized and locked boxes which contain the VSATs are strong enough to withstand natural and human damage so that minimal onsite technical support is needed.

Perhaps most importantly, AMN's Network-as-a-Service (NaaS) model allows Africa's Tier-1 Operators to expand their network coverage deep into rural areas with no CAPEX investment and no OPEX risk. According to AMN, this model is the most efficient way for MNOs to expand their rural coverage, because AMN's business model is designed around the needs of the operator. AMN understands the challenges that all operators face in a capital-intensive industry in regions with practical limitations on the availability of affordable capital. This business model and the satellite technology behind it is both sustainable and profitable.

Gilat is the World Leader in CBH over Satellite

Gilat is recognized as the world leader in CBH over satellite, reaching 40% market-share in modem shipments according to a report by industry analyst NSR, 2022. Gilat, with its SkyEdge II-c platform and Capricorn family of VSATs, has deployments of large networks worldwide consisting of tens of thousands of sites that are being connected with satellite backhaul, thus connecting previously 'cut-off' communities with the rest of the world.

Gilat has a long-standing partnership with AMN, providing high-quality solutions for cellular backhaul over satellite to serve Tier-1 Telcos coverage throughout Africa. Both companies share a common goal of enhancing the lives of people in Africa with high quality connectivity.

For more information please visit: [Cellular Backhaul](#) or contact us at: info@gilat.com