Ghana has a long history of selling fiber optic cables for communications

Overview

Thomas Owusu Mensah (1950 – 27 March 2024) was a Ghanaian-American chemical engineer and inventor who contributed to the development of fiber optic manufacturing and nanotechnology. He had 14 patents, and was inducted into the US National Academy of Inventors in 2015. In 2017, Mensah served as editor-in-chief of the textbook Nanotechnology Commercialization, published by John Wiley & Sons.

Key Takeaways

Ghana has developed a robust fiber optic infrastructure, connecting the country nationally and internationally through both terrestrial and submarine cables.Early Initiatives and National Projects

Ghana's fiber optic journey began in earnest with the National Broadband Strategy (NBS) launched in 2010, aiming to expand broadband access nationwide and achieve universal connectivity by 2020 . The Ghana Fiber Optic Network Project, initiated in 2012 under President John Mahama, further accelerated this effort by expanding fiber-optic infrastructure to improve internet penetration, telecommunication services, and integration into the global digital economy . Key components included undersea cable landing points, terrestrial fiber links connecting major cities, and last-mile connectivity to rural areas, which collectively increased internet penetration from 10% to over 70% .

Submarine and International Connectivity

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Ghana is strategically connected to multiple submarine fiber-optic cables, which serve as the backbone for international communications. These include SAT-3, MainOne, WACS, Glo-1, and ACE, providing high-speed data transmission between Ghana and Europe, Africa, and beyond . Recent additions like Google's Equiano cable and the planned 2Africa cable further enhance international bandwidth and redundancy, ensuring reliable connectivity even during cable outages .

National Fiber Backbone and Expansion

Domestically, Ghana has invested in a national fiber backbone, including the Eastern Corridor Fiber Optic Backbone, completed in 2015 as an 800 km link connecting coastal towns to northern regions . By 2021, Ghana had over 11,000 km of fiber-optic infrastructure, linking more than 2,000 communities . These networks support high-speed internet, reduce latency, and enable bandwidth-intensive applications such as cloud computing, video streaming, and e-commerce .

Technological and Economic Impact

The expansion of fiber optic networks has significantly boosted Ghana's digital economy, enabling widespread internet adoption, improved telecommunication services, and the growth of ICT-related jobs . The government continues to encourage private sector participation to enhance coverage, particularly in rural areas, and to reduce broadband costs . Ghana's fiberization efforts have also positioned the country as a regional hub for business process outsourcing (BPO) and ICT services, connecting local companies to international markets .

Notable Contributions

Ghanaian engineers, such as Thomas Mensah, have contributed to the development of fiber optic technology globally, highlighting the country's role not only in deploying fiber networks but also in advancing the underlying technology . Overall, Ghana's history in fiber optic communications reflects a combination of strategic government initiatives, international cable partnerships, and private sector investment, which together have transformed the country's connectivity landscape and integrated it into the global digital economy.

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Article Content

Thomas Mensah (engineer)

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