

Article Overview

Global Fiber Peru has deployed a groundbreaking subaquatic and buried optical fiber network in the Amazon, connecting 500,000 users across 400 communities in Peru, Colombia, and Brazil.

Overview of the Amazon Fiber Project

Global Fiber Peru, in collaboration with Nokia and FYCO, has successfully installed a subaquatic optical, IP, and fiber broadband network buried in the Amazon River. This network interconnects remote communities in the three-border region where Peru, Colombia, and Brazil meet, including Iquitos and Santa Rosa de Yaravi in Peru, Leticia in Colombia, and Tabatinga in Brazil . The project enables FTTH broadband access and multi-gigabit services for enterprises, bridging a significant digital divide in previously inaccessible areas .

Technical Deployment

The network uses a comprehensive optical solution including Nokia's 1830 Photonic Service Switch (PSS), 7750 service routers, 7250 interconnect routers, 7210 service access systems, optical line terminals (OLT), optical network terminals (ONTs), and Beacon 1 devices for premium Wi-Fi . FYCO provided local expertise in fiber telecom networks, while Nokia offered professional services, training, and maintenance . The project also includes upgrades to existing fiber networks in Lima, Cusco, and Huancayo .

Benefits and Impact

The buried optical fiber network has enabled high-speed internet connectivity for 500,000 users across 400 Amazonian communities, supporting economic activities such as agriculture, fishing, timber extraction, tourism, and border trade . It provides reliable broadband for education, healthcare, and enterprise services, significantly improving digital inclusion in remote regions .

Underground Fiber Cable Considerations

Underground fiber optic cables, whether buried directly or installed in conduits, are designed for durability, safety, and long-term reliability . Key features include:

- o Armored Sheath Layers: Steel or aluminum protection against mechanical stress and rodent damage.
- o Water-Blocking Mechanisms: Gel-filled cores or superabsorbent tapes to prevent moisture ingress.
- o Temperature Resistance: PE jackets rated for extreme temperatures, ensuring performance in diverse environments.
- o Installation Methods: Direct burial or conduit installation, with careful modeling of soil composition and optimal burial depth to prevent damage . These design considerations ensure that the fiber network remains

Peru Buried Optical Fiber Cable

operational in challenging terrains like the Amazon rainforest, where soil movement, river currents, and environmental conditions pose significant risks.

Conclusion

The Peru buried optical fiber initiative represents a major technological and social milestone, providing high-speed connectivity to remote Amazonian communities and enabling cross-border communication. By combining subaquatic deployment with robust underground fiber engineering, Global Fiber Peru has created a future-proof network that supports both residential and enterprise needs while overcoming the logistical challenges of the rainforest .

El proyecto busca interconectar a Perú, Costa Rica, El Salvador, Guatemala y Honduras con el cable submarino transatlántico

The new subaquatic network is buried in the Amazon River, and apparently interconnects 500,000 users across 400

Six years ago, Raúl García, then representing the Peruvian government, signed a project agreement with YOFC at the

Press Release Nokia deploys fiber network in the heart of the Amazon rainforest with Global Fiber Peru New subaquatic optical, IP

Mistral is Telxius" commercial name of the South Pacific Submarine Cable (SPSC). The SPSC/Mistral cable system is

Half of operators in the Andean nation are investing in the deployment of fiber optics, the sector regulator told a webinar.

Este proyecto despliega aproximadamente 7.300 kilómetros de cable submarino de fibra

The global fiber optic network, spanning over 1.8 million km as of 2025 (per TeleGeography),

PDF | On Nov 1, 2018, Martin M. Soto-Cordova and others published Evaluation of the National Optical Fiber Backbone Network

Buried in the Amazon River, a new extensive subaquatic optical, IP and fiber broadband network connects

Fibertel is a specialized service provider in Peru that offers comprehensive fiber optic services, including



Peru Buried Optical Fiber Cable

consultancy, design,

National Optical Fiber Backbone Network One of the strategic targets of the Ministry of Transport and Communications is Digital

La red, incrustada en el río Amazonas, conecta las ciudades de Iquitos y Santa Rosa de

Placing cables underground has the added benefits of reducing transmission losses, aiding planning consent and reduced risk of

Lima, 9 March 2021. Setting a new milestone in the development of telecommunications in Peru, Claro and Telxius today announced

Buried in the Amazon River, the new subaquatic network interconnects 500,000 users across 400 communities located in the heart

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