

Portuguese start-up offering standardized narrowband IoT connectivity via satellite on remote areas is seeking long-term agreements with potential users to validate the market solution fit.

Summary

Profile type

Technology offer

Company's country

Portugal

POD reference

TOPT20230810028

Profile status

PUBLISHED

Type of partnership

**Research and development
cooperation agreement**

Targeted countries

• **World**

Contact Person

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Term of validity

10 Aug 2023

9 Aug 2024

Last update

10 Aug 2023

General Information

Short summary

This Porto-based company is determined to provide easily accessible connectivity for everyone, everything, everywhere. Their mission is to offer standardized narrowband IoT connectivity via satellite, on remote areas. Potential partners are satellite platform providers, experts in satellite communication hardware and software, telecom operators, and government entities. The company seeks long-term agreements, such as MoU or partnerships, with potential users to validate the market solution fit.

Full description

The startup is determined to provide easily accessible connectivity for everyone, everything, everywhere. The team is focused on affordably connecting humankind, unleashing a new wave of IoT-based business models, while contributing to bridge the digital divide.

As of 2021, more than 3.9 million subscribers, from mobile operators to governments and industry at large, are already using satellite communication to enable their IoT-based business models. The number of users is growing exponentially, and the expectation is that in 2026 there will be more than 21 million subscribers worldwide of IoT via satellite. To add-up, roughly only 20% of Planet Earth is served by cell towers, meaning that a significant part of Earth's land has no mobile coverage, and hence, today, there are still more than 450 million people "disconnected". The use of space seems like the only feasible path to develop an affordable, easily accessible, and fully optimised

solution for a global connectivity problem.

Despite recent breakthroughs, satcom are still very expensive, complicated, inaccessible, and complex to setup and use. Promises of standardised, low-power, low-cost connectivity have not yet been materialised. Indeed, the growing demand on the users' side, especially in terms of price and easiness of use, has not been met by the existing infrastructure and, thus, the urge for satellite connectivity continues to grow.

The Portuguese company plans to develop, build, launch and operate a satellite constellation covering every point on Earth, providing the world with an affordable, standard, hassle-free, low-bandwidth, connectivity network. Its network will integrate space nodes – a heterogeneous satellite constellation, both in low and higher altitudes –, as well as ground nodes acting as access points to the network, both for personal applications (e.g., emergency support on remote areas), as well as IoT applications (e.g., fire prevention, livestock monitoring, defence and ocean tracking).

At its technological core, the startup is targeting the expansion to space of widely disseminated terrestrial, low-power, low-data rate communication networks in the unlicensed ISM radio bands – the so-called LPWAN - Low Power Wide-Area Networks (already with +1Bn devices connected worldwide), while keeping its low-level technology compatible with the auspicious arrival of 5G NB-IoT (Narrow-Band IoT) standard protocols targeted at the future integration of satellite and terrestrial networks, allowing for seamless provision of IoT connectivity to standard cellular devices.

Its multidisciplinary founding team brings together talent, capabilities, experience, and expertise both in the space sector, as well as in the telecommunication one. Together, the team is attracting support from industry-recognised veteran entrepreneurs, enterprises and VCs, as well as support from various potential customers, from different industry-verticals, all the way to telecom operators.

Advantages and innovations

The company's Unique Selling Proposition is the provision of an affordable, standard, hassle-free, low-power dedicated connectivity network on remote areas that uses standardised communication protocols, such as 5G NB-IoT compatible with LoRaWAN with unlimited 240 bytes messages per user, per month.

To do so, the startup will offer a distinguished service that is:

- Universal and standard: by using connectivity protocols and standard ground hardware to enable easier integration for hassle free deployments.
- Affordable:
 - o Between 50€ to 150€ savings per IoT device when compared to networks using proprietary connectivity and hardware solutions.
 - o More than 10 times reduction in the monthly subscription price, when compared to today's IoT via satellite market leaders, targeting a standard service providing unlimited messages (at 240 bytes per message) for 5€/device/month.
- Business Enabler: by allowing new players to build up their business models on top of The company's network and white label solutions.

Technical specification or expertise sought

Potential partners (satellite platform providers, experts in satellite communication hardware and software, telecom operators, and government entities) to establish long-term agreements, such as MoU or partnerships, with potential users to validate the market solution fit.

Stage of development

Concept stage

Sustainable Development goals

• **Not relevant**

IPR Status

Secret know-how

Partner Sought

Expected role of the partner

1st partner: Enterprises in the logistics and transportation sectors, agriculture, travel agencies, etc. At this stage, the Portuguese startup will leverage existing satellite networks to address terrestrial connectivity challenges. Hence, they are actively seeking early-stage partnerships with potential customers to understand their specific needs, collaboratively develop their solution, and conduct thorough testing.

2nd partner: Satellite platforms providers

To accelerate technology validation and demonstrate communication between the ground, and space gateway, the company requires an in-orbit demonstration on-board a partner's satellite platform, speeding up the de-risking phase.

3rd partner: Research centre, university or a company working in embedded software and hardware for satellite communications

The company is targeting the expansion to space of terrestrial, low-power/data rate communication, like LoRaWAN, while keeping its technology ready for the 5G NB-IoT.

As a startup, with multiple problems to address in a short amount of time, allied to a somewhat poorly defined protocol, especially related with Non-Terrestrial/Terrestrial network interaction, the firm seeks a core partner wanting to work with them on the development of a space gateway 5G NB-IoT enabled.

Type of partnership

Research and development cooperation agreement

Type and size of the partner

- **SME 11-49**
- **SME <=10**
- **R&D Institution**
- **Big company**
- **SME 50 - 249**
- **University**
- **Other**

Dissemination



Technology keywords

- **01006008 - Satellite Technology/Positioning/Communication in GPS**

Targeted countries

- **World**

Market keywords

- **01005001 - Satellite services/carriers/operators**

Sector groups involved

