

Acklio accelerates the IoT market by raising barriers to massive and sustainable deployment

Acklio, startup created in Rennes (France) in 2016, has created a new technology that ensures interoperability and interconnection between any type of networks and radio technologies. This innovation, implemented for the first time by Acklio, is about to be recognized as an international standard by the IETF.

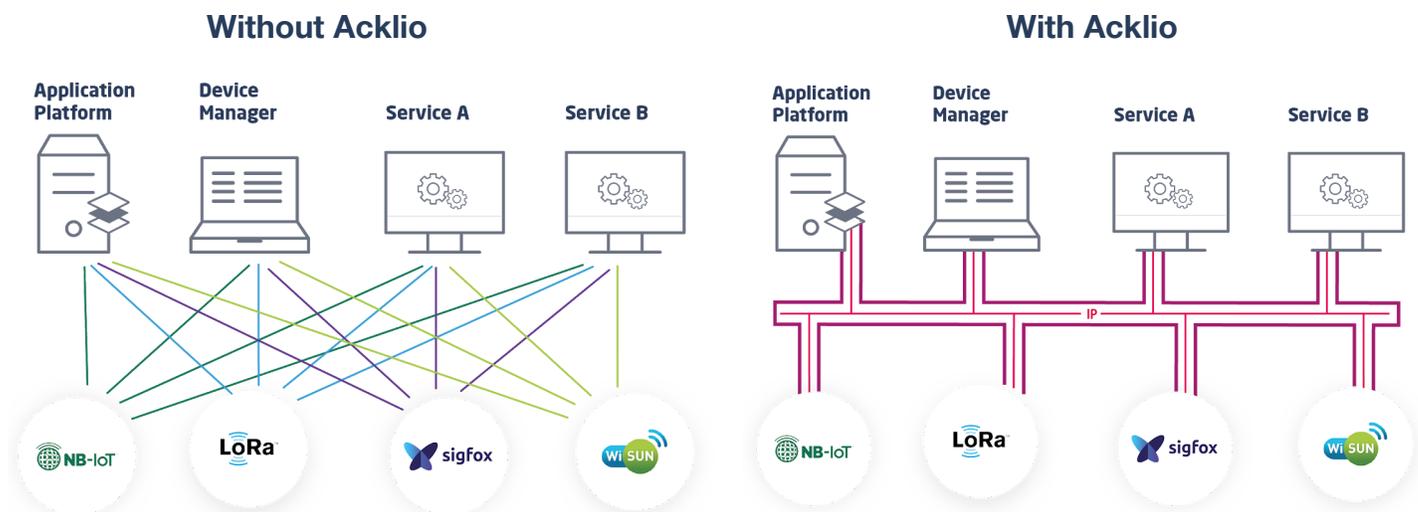
The Internet of Things offers new opportunities to address key global challenges such as Industry 4.0, energy transition, smart city, smart farming and connected health. These use cases require energy efficient solutions and dedicated protocols to collect and transmit data. That's why new technologies have emerged: a new generation of connected devices as well as low-power and wide-area networks (LPWAN) such as LoRa, Sigfox and NB-IoT. The latter can emit messages of small size, long range and energy saving. That's why they are well suited to sensors and small battery-operated devices.

Nevertheless, there is a gap between announced market forecasts and the current status of the IoT market. The reasons: the Internet model as we know as IP (Internet Protocol), based on IPv6, is not compatible with these new types of networks and devices. Available solutions are not interoperable and difficult to integrate. Having to choose for a technology is to take a risk on the obsolescence, the sustainability of the investment and the secure and simple way to use data.

Unique technology to accelerate the IoT market

To address this issue, Acklio developed a new compression and fragmentation technology to ensure compatibility between the LPWAN networks and the IP protocol. It enables interoperability between connected devices and any type of LPWAN (Low-Power, Wide-Area Network).

Acklio accelerates the IoT market by raising barriers to massive and sustainable deployments. Indeed, this technology: makes the development of new IoT solutions as simple as web services, secures end-to-end communications, and unifies systems and networks.



Acklio: world-renowned technical expertise

Acklio is a spin-off of a research laboratory recognized for its work on IP. Its unique solution is the outcome of 20 years of R&D innovation is the outcome of 20 years of R&D and 13 theses.

20-year research experience: this is what Acklio represents for IMT Atlantique (formerly Telecom Bretagne). The company relies on a lot of researches and publications, which resulted in 13 theses. The trigger was the meeting, 5 years ago, between Laurent Toutain, president of IPv6 scientific committee, and Alexander Pelov. The first was then senior lecturer in the lab since 1992, when the second became associated professor. Together, they realized several field experiments, which led them to create Acklio in March 2016.

First experimentation with LoRa FABian

One of the experiments will be decisive: the LoRa FABian project. Realized in November 2014 with Rennes Metropole, it “allows to share electric consumption data of individuals” says Alexander Pelov. It came from the combination of “*LoRa, for telecommunication, and the LabFab (the Fablab of Rennes), for prototyping and experimentation.*” The project gathered contributions from companies like Kerlink, Wi6labs, Cityzen Data and TDF. It results to an open source system allowing IoT device integration. The researchers tested a new compression-decompression technology, that later become the heart of Acklio’s technology.

A step ahead to stand competition

The co-founders of Acklio brought this technology to the IETF for its recognition as an international standard. Today, Acklio is the first to implement the innovation in an industrial solution that gives it a leading position on the market. Even if, once standardized, the technology will become accessible to all, it will take several years for competitors to propose an equivalent solution. This exclusive solution has already been demonstrated and approved by major’s operators and industrials such as Cisco, Objenious and Sigfox.

Fundraising and hiring

The company, based in Rennes, is now entering a phase of intense growth. Already composed of 16 employees of 6 different nationalities, Acklio will soon recruit R&D engineers and sales profiles. Its strong technological lead and its unique positioning make it the world leader in its market today.

A fundraising, announced in 2018, will support this acceleration, both on the product roadmap and on the commercial side. The company will also strengthen its presence on many international tech events to boost its international influence.



Acklio enabler of an international committee about Internet standards

Alexander Pelov, CEO of Acklio, has been chairing for several months the working group of an international technical committee dedicated to the LPWAN. It demonstrates the recognition of Acklio's technology.

The Internet Engineering Task Force (IETF) has been supporting the growth of the Internet since 1986 by defining the open standards that guarantee the interoperability and evolution of networks. This standardization organization is structured in several areas (Internet protocols, security, management, application protocols), themselves broken down into working groups.

For the IETF to open a working group dedicated to LPWAN, Acklio had to convince the 4000 community members about the relevance of the approach, industrial interests and to validate that:

- The issue is well identified and the industry wants to resolve it.
- The issue cannot be resolved by any existing solution.
- No existing working group is able to solve this issue.
- A solution can be provided in a reasonable time.
- No other standardization organization deals with this issue (e.g. 3GPP).

In this context, the goal of the working group impulsed and co-chaired by Acklio is to precisely define the general architecture of the IP protocol compression regarding any LPWAN technologies.



The creation of this LPWAN working group creation is a singular event. It was made possible thanks to the research on IoT and telecom on the one hand, **the spectacular progress of France in the field of LPWAN technologies** on the other hand. **Acklio keeps a unique position on the market and is supported by giants like Cisco, Ericsson, Nokia, Microsoft, Google, Orange, Sigfox and Actility (200+ total).** Together, they agree that this technology is the only valuable solution for LPWA networks interoperability.

This is a strong validation of the industrial need and a global proof of the absence of alternatives. Finally, it guarantees that this will be the only globally standardized solution - within the IETF or any international standardization organization.