



EPO SME CASE STUDIES | WEBDYN

# Integrating ICT creates solutions for the Internet of Things

Webdyn, a French SME based in Paris, provides hardware and software components for complex networks, especially in the solar energy area, and advises industrial clients on how to implement the Internet of Things (IoT) to manage their smart energy systems. At its inception, Webdyn was able to create a significant leadership position, thanks to a European patent that was obtained prior to the market boom. While still at the application stage, the patent provided not only an exclusion right but also valuable leverage in securing freedom to operate in the company's business area, allowing it to negotiate a non-enforcement and de facto licensing agreement before the patent was even granted.



Webdyn designs and produces material and software solutions for machine-to-machine communication on the smart grid, energy, environment and transport markets.

Webdyn is a EUR 4 million revenue company which was created and funded by early investors in 1997, with additional financing by venture capitalists in 2010. Located in Paris and with an export office in India, it currently has 30 employees. Its core business is to help industrial clients – mainly in the smart energy sector – to successfully implement the Internet of Things (IoT) in their operations.

Webdyn offers low-consumption hardware and software components through product sales and software licensing, as well as engineering services for their implementation in automation systems. Its products include IP gateways (used to connect wide area networks to local area networks), end points such as ICT concentrators (used to collect local sensor-generated data from local area networks, aggregate them and send them through wide area communication networks), and complete ICT systems for data collection, management and control. It has also developed advanced skills in advising industrial clients on energy management.

In particular, Webdyn has established strong positions in solar energy generation installations, smart energy distribution networks (smart grids) and smart energy consumption networks (smart building, transportation or heavy industrial processes). It develops and integrates specific systems for use in networks of smart connected objects, including the control of energy storage systems, battery charging systems and security systems for photovoltaic farms. These systems process an array of parameters such as costs, energy demand, production capacity, consumption data, contracts and market data, as well as weather conditions. Depending on energy demand, they enable Webdyn’s clients to optimally select between energy storage (battery), immediate consumption and the injection of electricity into the grid.

According to Philippe Faugeras, CEO and founder of the company, Webdyn was one of the first movers to provide solutions to the increasing need for integration of ICT and big data processing modules. Since then, its business has been expanding worldwide, especially in regions where solar power activity is high (India, China, South-East Asia and Africa). It is currently one of the few companies, all of which are European, that are active in this growing market.

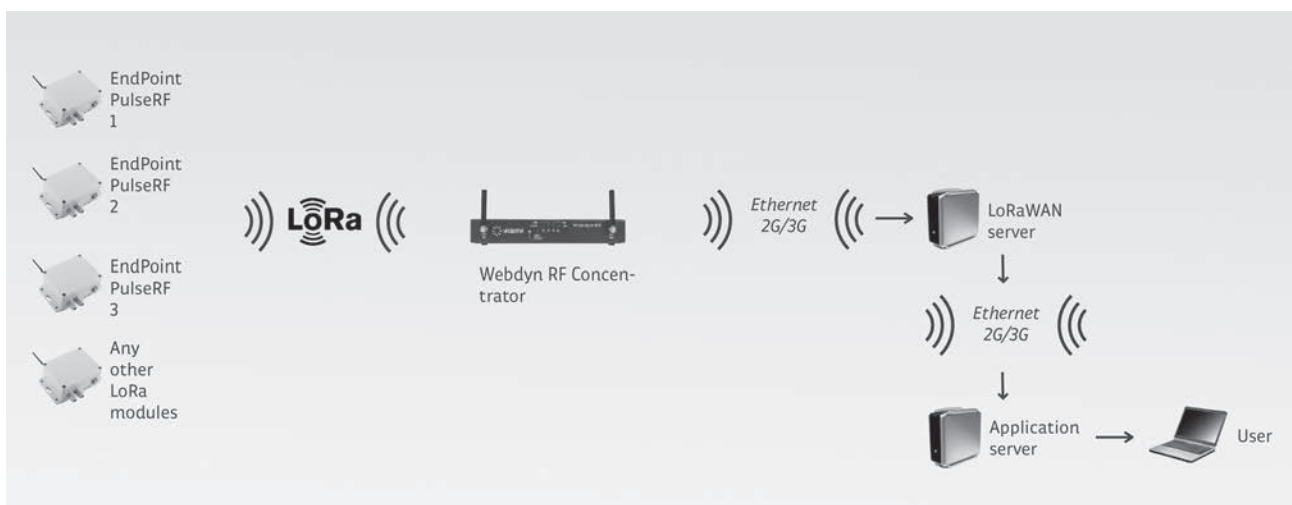
### Fast mover

Webdyn’s IP strategy choices are dictated by the speed of technical change in the IoT area and by the increasing commoditisation of hardware and software for the IoT. As Faugeras sees it, Chinese suppliers may come to dominate this market as time goes on. Webdyn’s competitive advantage chiefly depends on its ability to maintain clients’ trust in its high value-added development services, in addition to the hardware and software it will continue to provide.

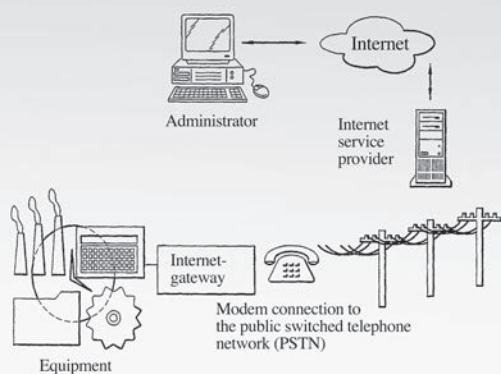
“We continue to use IP to create strategic value for the company as well as commercial benefits for our customers.”



*Philippe Faugeras*  
CEO, Webdyn



WebdynRF LoRaWAN is a platform dedicated to wireless networks using the LoRa radio technology. It is designed to link counters, sensors and a data server via the LoRaWAN network.

**Fig. 4**

The patented invention (EP1523832) relates to a method for connecting an electronic system to a communications network through an access provider, such as the internet, and a device, a gateway, for carrying out the method. Gateways act as a communication link to the data generated in electronic equipment and one (or more) computer platform that operates the data received from equipment. With such architecture it is possible to manage remote, electronic equipment using standard IT tools (TCP/IP and other Web-based tools). The use of standard tools and protocols reduces implementation and operational costs and facilitates the dissemination of the process and systems.

To stay ahead of the market, Webdyn relies on its know-how to quickly adapt and integrate the latest technologies into its systems. Early-stage integration of new industry standards is especially critical in this respect. Compliance with these standards is achieved through certification and dedicated agreements. Technical specifications issues are dealt with by original equipment manufacturers, who offer compatible modules that embed all standard licences. Webdyn buys these components and can integrate them in the knowledge that they have already been certified as compliance-capable.

Webdyn leverages its ability to anticipate future industry requirements to take a leading position in integrating these technologies. Besides well-established wireless communication standards such as 3G and WiFi, new low-consumption standards such as RFID, LoRa and Sigfox are becoming popular in the IoT business. Webdyn takes an active role in the alliances that aim to create these standards. It contributes to the interoperability specification documents that are prepared within these alliances, which is much appreciated by its customers and creates a significant part of its marketing value.

## Early patent key to company growth

Being focused on staying agile in a fast-moving environment, Webdyn no longer invests in developing and patenting its own inventions. However, the company is still benefitting from a patent filed in its early days, when it was creating proprietary technology. This patent, which covers major European countries, was filed to protect a method allowing an administrator to inspect the client's systems remotely and to provide whatever intervention is required.

Webdyn profited from its patent when building and developing its marketing and corporate strategies. The patent, though still pending at that time, was instrumental in getting recognition for the company's advanced engineering position in complex system integration. Its publication naturally led customers to ask Webdyn to design, integrate and install complete automation networking solutions – an advantage which it has again enjoyed more recently in the fast-growing solar segment. The patent also protects one of the core intangible assets of the company and helped Webdyn to attract new risk capital for its expansion in 2010.

The main benefit from the patent was, however, the freedom to operate (FTO). During its expansion, the company entered into negotiations with a number of prospective major customers from the transport and energy sectors. One of these customers had patented early technology developments in Webdyn's field of operation, and contended that Webdyn was infringing these patents. In response, Webdyn analysed the customer's products, comparing them with its own patent application, and was able to identify a number of potential overlaps.

### TAKEAWAY

#### STRATEGIC USE OF PATENTS

Patents can be used as tools for negotiating with rival companies. When you file a patent application, it is vital to consider not only the countries that you want to target, but also those that are most important for your competitors, even if you do not expect to enter these territories with your products or services.

At this stage, the two parties concluded that there was no advantage to be gained in enforcing their exclusion rights against each other. They agreed to combine forces to benefit from each other's patent protection, expertise and products.

## TAKEAWAY

**CROSS-LICENSING**

A strong patent can be useful for securing freedom to operate, for example by means of a cross-licensing agreement. The licence does not always have to be a formal grant; freedom to operate can also be achieved by means of a covenant not to sue.

Interestingly, Webdyn's patent was still pending during these negotiations. The fact that an application had been filed was sufficient leverage in what was a crucial business transaction.

## TAKEAWAY

**PENDING PATENT**

A patent application can have a significant business value, even though the patent is still pending. It can act as a signal to potential infringers that they might be liable for damages (including back-dated royalties), seizure and injunction once the patent is granted.

## Patent prosecution – lessons learnt

Webdyn chose to file its European patent application via the international (PCT) route. Compared with the direct EP route, this gave it an extra 18 months before it had to decide whether or not to request examination. Securing legal exclusivity quickly was not deemed essential for its business at that stage. The company preferred to have more time to decide whether or not to incur the cost of continuing the application process. This also gave it the option to target different potential markets (i.e. Spain, Italy, Germany and France) for product manufacturing. It originally designated 24 countries, of which eight were eventually selected for validation (Germany, France, Italy, Netherlands, Spain, Great Britain, Belgium and Luxembourg).

## TAKEAWAY

**COST-EFFICIENT PATENT PROTECTION**

The cost of patenting is a major factor. By choosing a particular filing route you can save time and delay costs. The time gained can be used to develop commercial activities and acquire information before you decide whether or not to continue.

The patent prosecution phase was long and involved a number of office actions and discussions with the EPO examiner. The main issue at stake was the difficulty of properly defining the scope of the invention in a complex and emerging technology field. Looking back, it would have been better if Webdyn had carried out not only a prior art search but also an early FTO study, in order to get a clearer idea of the state of the art before writing the application. Such a study would have helped it to optimise the application process and reduce costs, as well as proactively release it from dependent third-party rights. It could also have revealed other patentable ideas.

## COMPANY PROFILE

**WEBDYN S.A.**

- Headquarters: Saint-Germain-en-Laye, France
- Year of establishment: 1997
- Staff: 30
- Turnover: EUR 4 million
- www.webdyn.com

**PRODUCTS/SERVICES**

Engineering services for automation systems and the Internet of Things, production of low-consumption hardware and software components

**MARKET AND TECHNICAL AREA**

Information and communication technology

**CUSTOMERS**

Energy, transport and industry

**PATENT PORTFOLIO**

One patent family: EP1523832

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