Beyond Voice over IP
Snom Beacon Technology: new solutions for localisation, theft protection and emergency calls
When it comes to professional VoIP telecommunication, customers who don’t want to compromise, always choose Snom. When we launched one of the world’s first IP telephones over 20 years ago, we not only changed business communication, but also laid the foundation for many other technical innovations.

Since then, both the technology as well as the requirements for our solutions and services have developed at a faster and faster rate.

With our high-performance DECT solutions, we have also set new standards for professional and wireless VoIP telephones. Compared to the previous model, the DECT base station Snom M700, the new M900 increased the scalability of the DECT infrastructures many times over: for the first time, installations of up to 1,000 base stations and 4,000 hand-held devices were possible, making the implementation of large projects in clinics, libraries or office complexes cost-effective and professional.

But the new Snom M series has much more to offer than just wireless telephony. Combined with the new Snom Beacon technology, it now enables companies to benefit from localisation, anti-theft and advanced alarm/emergency call functions in a cost-effective and reliable manner.

The Beacon

The Snom M9B Beacons are compact designed receivers that can register devices or tags approved in the network at close range (approx. 10m) via Bluetooth and report their location.

The tag in the proximity of the Snom M9B is detected and its position is transmitted directly and encrypted to a M900 base station via the DECT data connection. This information is processed in real time, to trigger, for example, a reaction.

Numerous application areas

The possibilities offered by this technology are as diverse, as they are efficient: there is no need to integrate additional systems, since the existing infrastructure is easy to expand. This not only enables resources to be used wisely, but also avoids additional complexity and costs.

The Snom Beacon systems have proven useful wherever live asset tracking or real time localisation or alarm systems are used.

For instance, hospitals and old peoples homes require a safe and functional system for the immediate localisation of mobile equipment, clients or nursing staff. The same applies to moving, frequently used work tools in logistics or inventories in museums, hotels or shops that are easy to steal.
Christian Rapp, consultant and project manager at Snom and one of the Beacon specialists: “In the initial phase of a project, the priority is to understand, how the devices function in practice. What could limit their functionality? Where else could we start as telecommunications manufacturer to offer a full-value solution. And where does an application scenario become so complex that we should close briefly with other experts or third-party providers? Only afterwards and after extensive tests can such a solution be put into real operation.”

Real life

One of the first successful pilot projects of Snom Beacon technology took place at Stengel GmbH in Ellwangen, a specialist for innovations in metal design. With around 850 employees, the Stengel Group manufactures an expansive range of products in approximately 108,000 m² production and storage space, from wet cells for cruise ships or modular prefabricated bathrooms to turnkey apartments for building construction, kitchens and metal furniture and even racks for IT infrastructures.

Annually, Stengel GmbH processes approximately 28,000 tons of material, making optimal control of the processes indispensable.

“As anyone can imagine, there is also an economic concern behind the optimised use of all production-relevant equipment”, says Heinrich Graf, the responsible engineer at Stengel. “At our company, the spacious site is a challenge.”

Therefore, during a first pilot project, all factory halls and forklift trucks were initially networked with the Snom M9B Beacons. In the company control room, which is also responsible for assigning the forklift trucks, employees have since been able to track the current location of the individual vehicles in real time on all headsets via the web app specially developed by Stengel for this application, and also where the cargo is being picked up or unloaded.

“What the cars are at a car rental company, are for us the forklift trucks, among other things”, says Graf. “Simply being able to see, where each vehicle is, without having to call the driver, who may then be no longer on route with the forklift truck, saves a lot of time and provides the perfect overview - and is therefore a real advantage.”
The following factors were particularly convincing for Graf and his colleagues:

• **Installation**
  A Snom M9B only needs a power connection and connection with at least one M900 DECT base station. Ergo no need for a wireless receiver or separate LAN cabling. This makes installation very easy. The Snom M9B can also be used as a transmitter (forklift) and as a gateway (receiver). This limits the costs for the overall solution. The power supply could also be ensured via solar panels.

• **Operation**
  The Snom tracking server can be located on-premise or in the cloud—depending on the requirements or on-site conditions. If the company uses Snom DECT phones, these can also be located via the system at any time.

• **Expansion stages**
  The Beacon application areas are as diverse as the requirements they can meet. What was particularly impressive at Ellwangen was the possibility of first implementing a practical application scenario (vehicle location) and then being able to successively expand the project at any time. Therefore, the tracking of pallets or other mobile devices is already planned.

  The location performance can also be personalised: even a few Snom Beacons suffice for a “rough” localisation, when it comes to accurate locating, good coverage is essential.

• **Integration into ERPs**
  Thanks to the open interface, the Snom tracking server can be integrated into existing ERP solutions or applications for warehouse management.

• **Full cost control at all times**
  A system that grows with you as needed, enabling a basic calculation of costs and timely allocation of investments: this transparency in cost control ensures planning and investment security.

**Snom Beacon solutions:**

- The beacon technology developed and optimised by us in recent years, is considered a highly professional solution completely aligned to the respective customer needs.
- Depending on the size and requirements of the projects, our specialists only work together with in-house developers or in combination with technically competent third-party providers. A beacon infrastructure is only rarely implemented “off the shelf”, since installations of this kind require careful planning and testing.
- Our experts are happy to offer you advice and accompany your project from the initial idea to the finalisation of the overall solution.

Further information about the Snom Beacon solutions can be found on our website at https://www.snom.com/ip-telefone/dect-telefone/mobi/m9b-beacon-gateway/