**SIGFOX** doesn't sell chipsets

**SIGFOX** doesn't build solutions

**SIGFOX** invented a radio protocol

**SIGFOX** operates its own global network
Core concepts
An object emits a radio message

Our antennas pick this message

We transmit this message to your server
Complex?

You send an **AT command**:

```
SigFox.print(« AT$SF=Payload »);
```

You receive the answer **on your server** via **Callbacks** or **API**
Complex?

Develop, subscribe, & certify once
& ship everywhere (inside Radio Zones)

Very cheap to develop Sigfox solutions &
deploy it. (between 1 and 10€/year)
Long range

**Ideal** cases

+200 kms (record at 1024)

**Reality**

City: 2-10 km

Rural: up to 100km.

= Network cheaper to deploy.
ETSI Regulation

1% emission each hour rule.

1% of 1 hour = 3600 sec / 100 = $\textbf{36 secs of emission}$

1 message sigfox = $\textbf{6 seconds}$

So we can send $\frac{36}{6} = \textbf{6 messages per hour (12 bytes)}$
Low cost != cheap

Very low subscription fees **but high SLA**
- (in deployed environments, success rate is >99%)

Simple hardware = **higher battery life**
- Only technology able to predict battery life consumption

Discrete objects = **a lot of them**
- more objets on the network mean cheaper price for customers
Different & complementary

• We don’t compete with others, we **complete** them.

• So cheap & easy to integrate, lots of use case will use Sigfox as **primary** or **secondary**.

• Sigfox + (GSM, BLE, WiFi, LoRa, & others ) makes a lot of sens

• It whole depends of the **use case**.
Spot it

• New geolocation service based on triangulation of BTS
• Works with all devices on our network, no additional cost
• KM accuracy, depends on density.
• Perfect for most of industrial tracking use cases
Ultra Narrow Band
Radio Spectrum

We listen **200 KHz** on the band
(we could do more)
each message is **100Hz wide**
Radio spectrum

Each repetition is 100Hz wide
Why UNB?
Frequencies

ISM bands: **Shared and non-licensed**

Comply with local regulations

- Europe: **868MHz** (ETSI 300-200)
- USA: **902MHz** (FCC part 15)
- etc.
Hardware solutions
Stack

- Stack is **free**, everybody can implement
- Preloaded with modules & SoC
- Can be integrated in compatible transceivers
- Distributed as binaries, compiled for various MCUs
- Can be integrated in most of compatible Sub-GHZ HW
Lots of different options for different needs

**Modules**: Easy to integrate, start at <2$

- TDNext, ATIM, Wisol, Innocom, M2COMM, etc. Lots of good options

**SoCs**: based on ref designs, a bit more modular

- ONSem, NXP (Qualcomm), Atmel (Microchip) etc.

**Transceivers**: implement the stack yourself

- STMicro, Texas Instruments, Semtech, etc.

Open ecosystem = fair competition on prices important to ensure maximum number of use cases.
How to start?

Couple of minutes

Lots of devkits available (from 20€)

Connectivity is included for developers
Use cases

Examples of solutions already in production
IoT Gadgets

- Water metering
- Silver economy
- Smart parking
Predictive maintenance

Connected beer
Connected Pallets
CAPTURS
Outdoor tracker
Oil & Gas
tank monitoring
ELM Leblanc
Connected boiler
SensDumpster
Connected trash
Weenat
Agriculture sensors