**Giinger**

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Objective of this document: This document aims to guide technical part for our **proof of concept** for safety equipment.

Concept: We want to allow a 2,4Ghz emitter to transmit some message to a mobile to verify the location of a person for a game.

Example :

Room 1



Smartphone reads

‘’00123’’

You are in Room 1 – you win



10 meters



Emitting @ 2,4 Ghz

An identifier (ID) ‘’00123’’

We think that we could be able to use a USB 2,4Ghzdongle to emit a unique ID as it is a cheap solution. The mobile phone then detects the ‘emitter signal, reads the unique ID (00123) and its signal strength.

Exemple : nRF24LU1

<http://www.semiconductorstore.com/cart/pc/viewPrd.asp?idproduct=13757>

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**Description**:

* Emit a 2.4Ghz signal including a unique code/message .
* What we need: the software to program to program the USB dongle + a programmable USB emitter/receiver.
* **The user should not need to turn on the WIFI or Bluetooth ! the app uses the antenna directly.**
* We need to be able to read on the smartphone: Frequency , unique ID/message , signal strength.

***Scenario - TEST : 1 laptop – 1 USB programmable Emitter/Receiver – 1 mobile***

Validate that it works :

Step 1 : Program the USB hardware with a unique identifier (ID = 00123). The USB hardware emits a 2.4Ghz ‘’00123’’.





Software

**Emit** @ 2,4 Ghz

‘’00123’’

Software

**Receive** @ 2,4 Ghz

‘’00123’’

Strength :Xx dB



Step 2 : Once plug to any USB port the USB hardware still emit ‘’00123’’



Emitting @ 2,4 Ghz

‘’00123’’

Iphone

reads

 ‘’00123’’

Strength :Xx dB



About 10meters