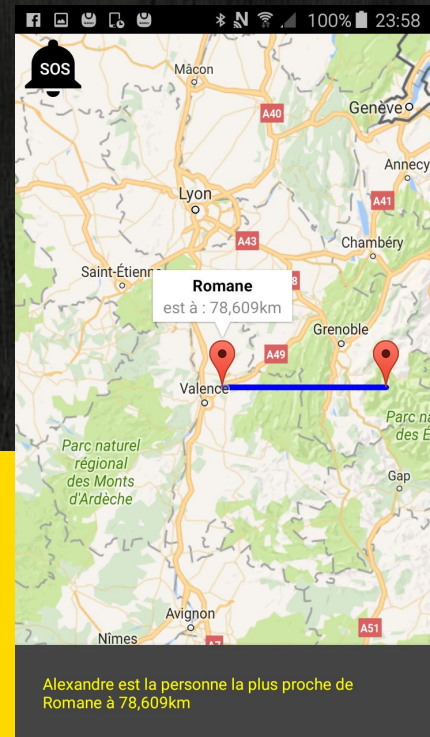




Ultratrail



Summary

1. The issue
2. The technologies
3. Our solution
4. Demonstration

Introduction

Creation from scratch of an android application

application designed to manage a group.

This application must be functional without
stable internet access

1. The problematic



1 - The problematic



Need of
adapted way of
communication
in extreme
conditions.

1 - The problematic

Goals of the app :

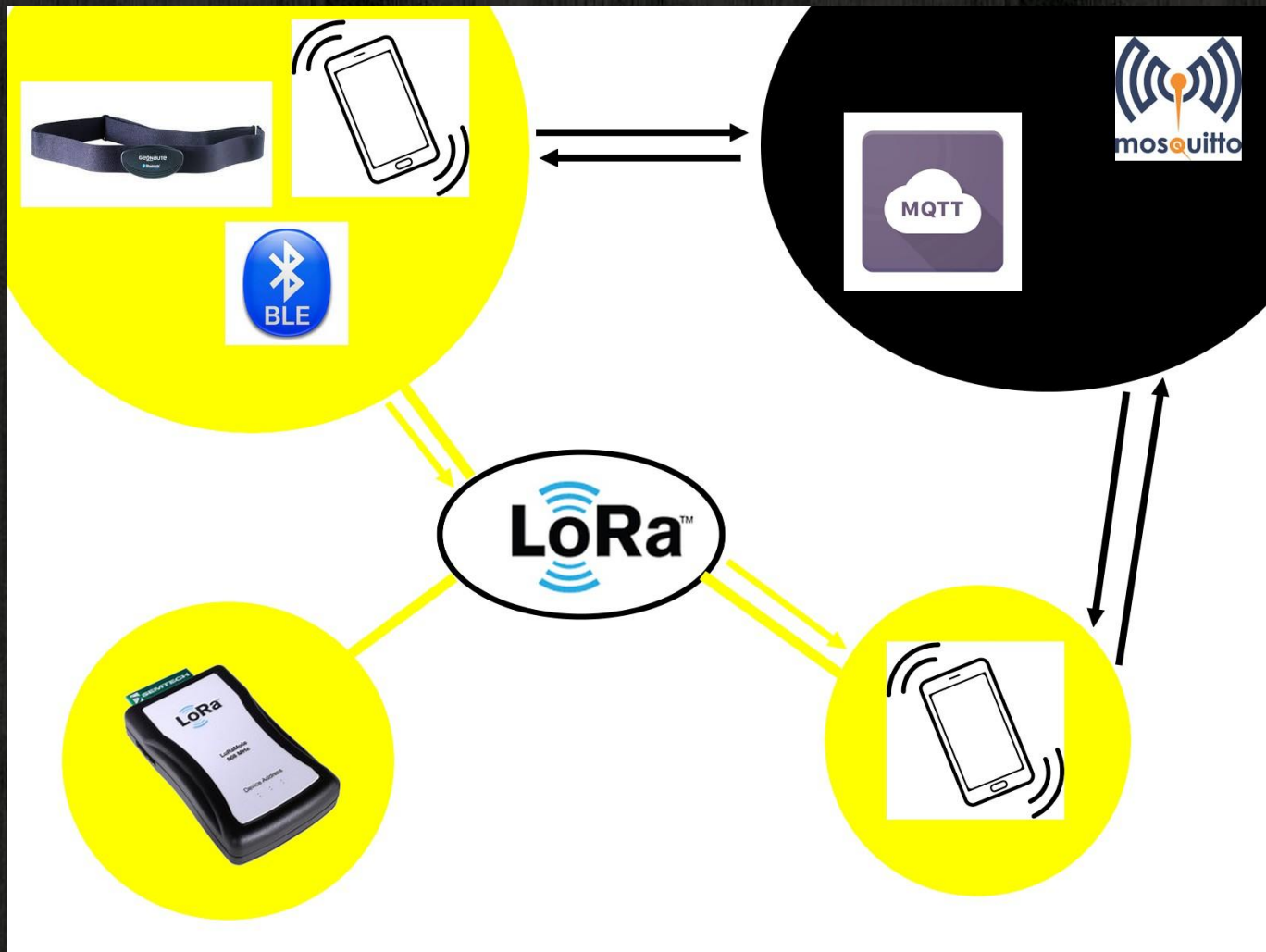
- Provide a map
- Provide the members of the group's position
- Provide a bluetooth connection
(to retrieve heart rate)
- Functional without internet access
- Store data on a server if an internet connexion is available

2.

The technologies used



2. The technologies used



Lora



Use of LoRamote.
Flashed with code from
LoRa-net.
Emission only

Use of RN2483
modem.
Needs OTG phone
Emission-Reception

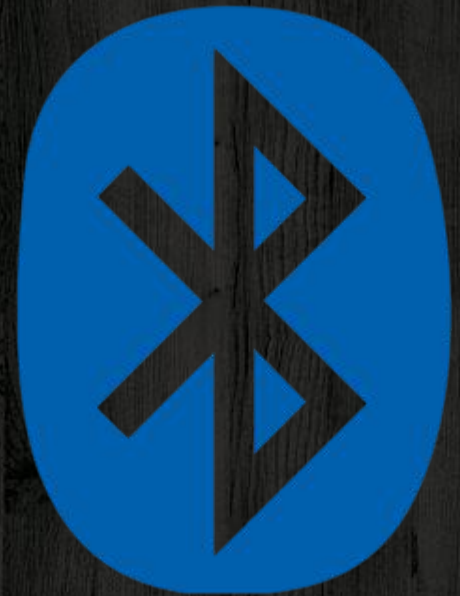


The Bluetooth low energy

Bluetooth low energy => extended lifetime

Managed by BluetoothLeGatt

Used to retrieve heart rate



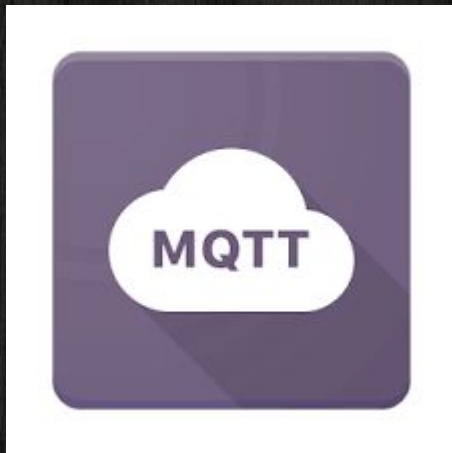
MQTT protocol

- Message broker on ovh serv

- Use of android paho mqtt



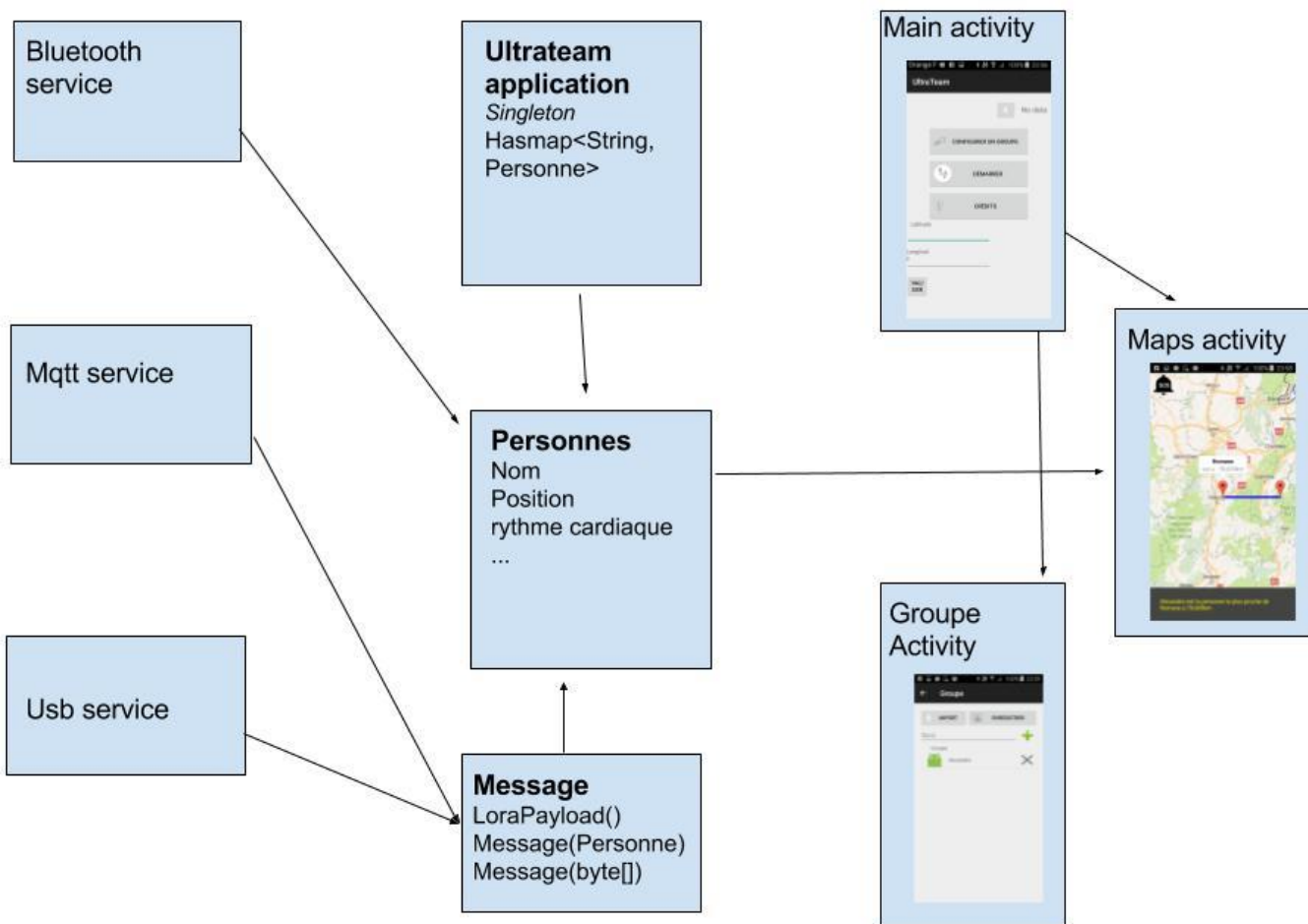
- publish on ultratrail/MyUserID



- Subscribe to
ultratrail/MemberID





3. Our solution





3. Our solution

UltraTeam

 No data

 CONFIGURER UN GROUPE

 DÉMARRER

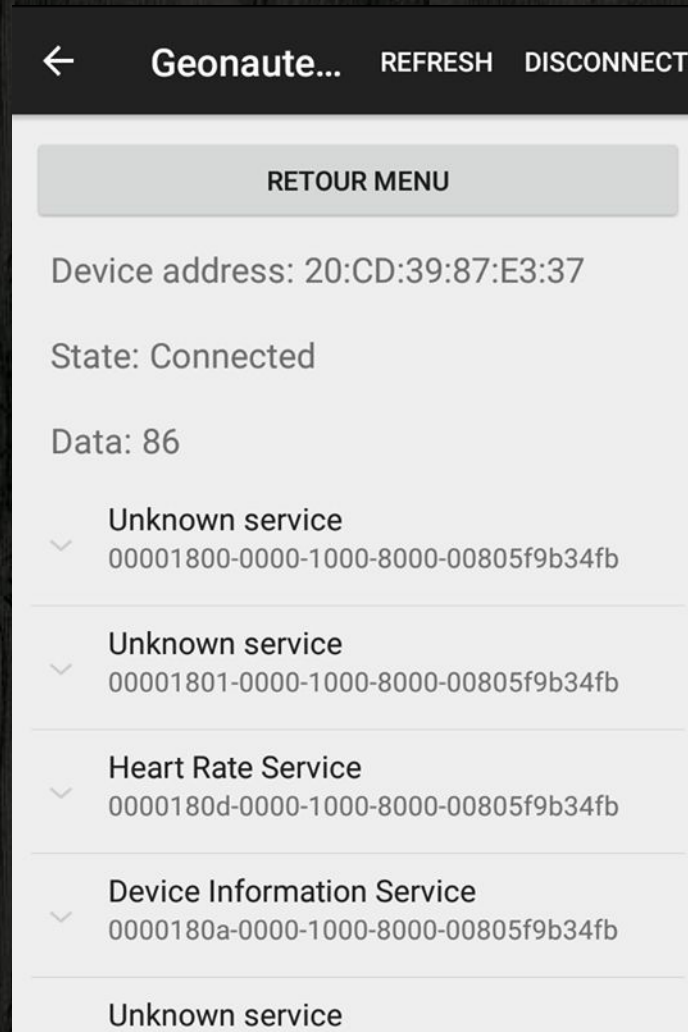
 CRÉDITS

Latitude

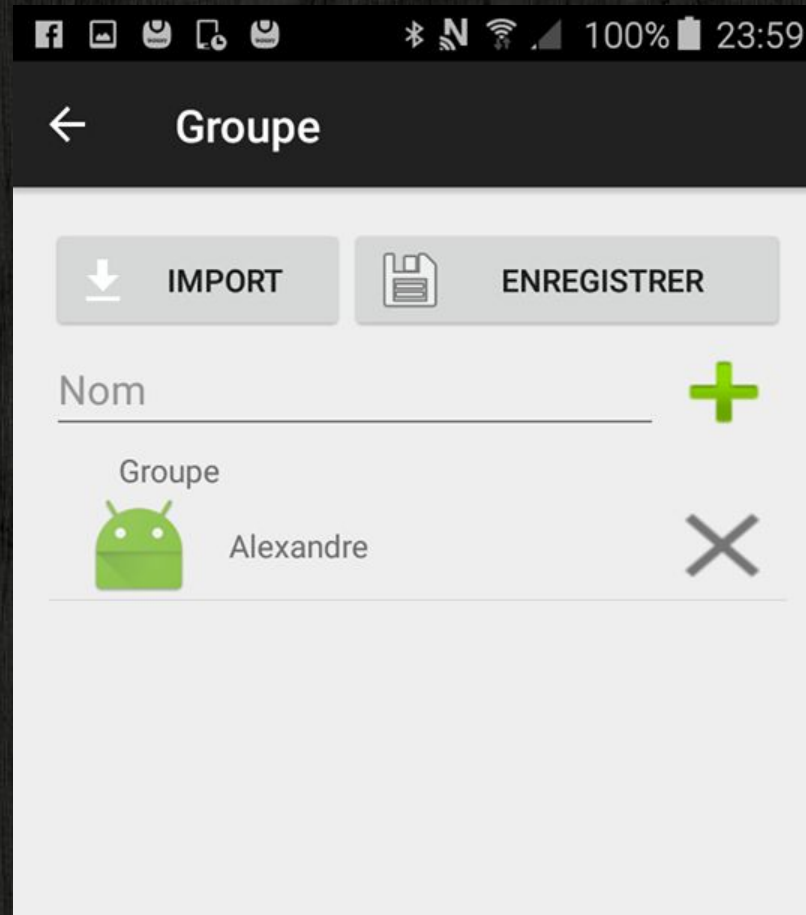
Longitude

VALIDER

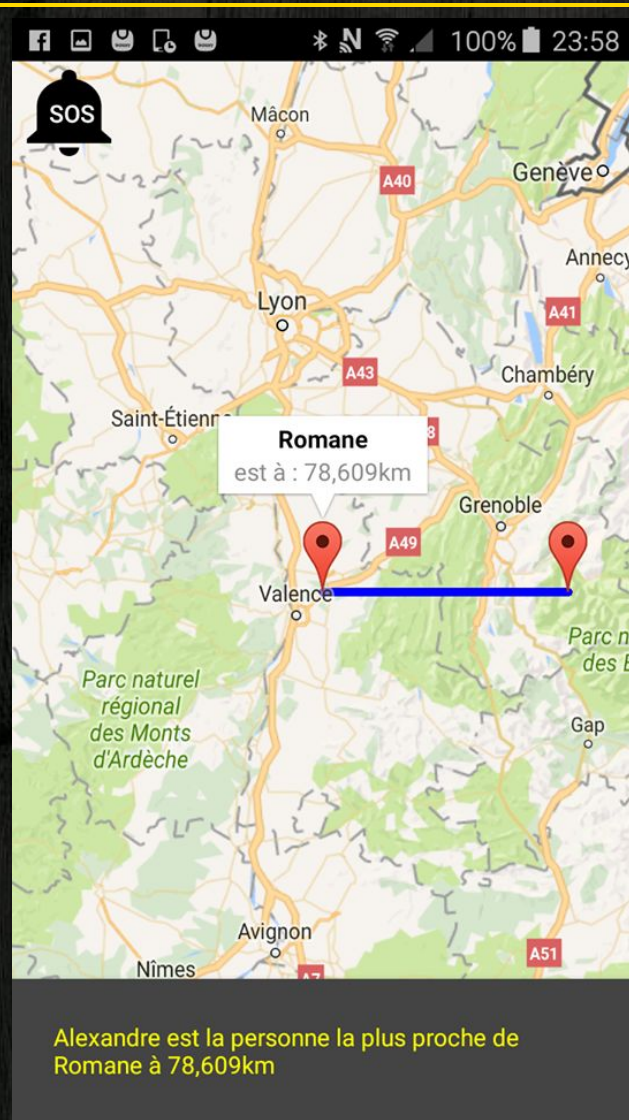
3. Our solution



3. Our solution



3. Our solution





4. Demonstration

Thank you for
your attention
