EITS

COVID-19

Do IT Smart

SOCIAL DISTANCING AND CONTACT TRACING

PRINCIPLE

- Ranging between tags, no fixed anchor needed
- Alarm / Vibration triggered when intruding 6ft social safe zone
- Intruding incident information including ID / Time / Duration recorded in tags
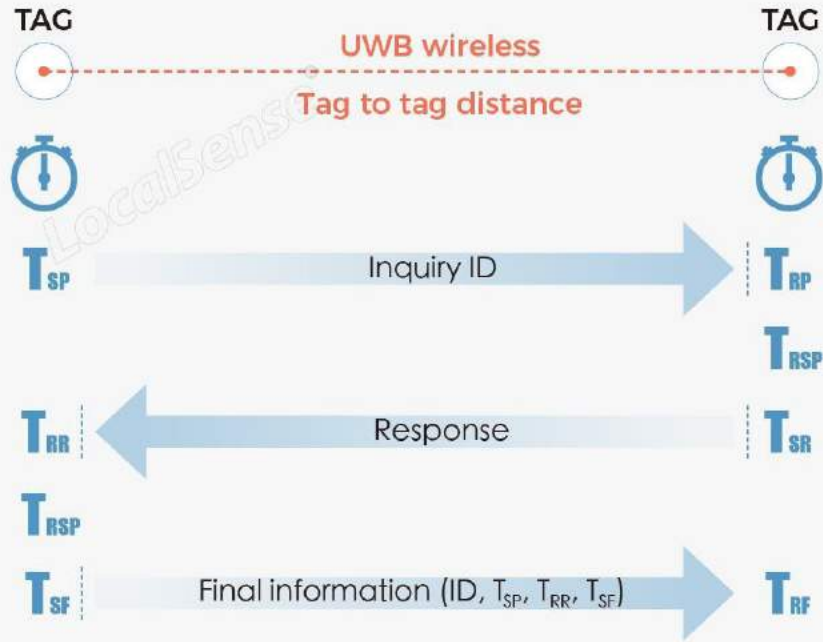
PRINCIPLE

UWB gateway

Entrance

- Only one gateway needed at the entrance of factory or hospital
- UWB gateway receive contact record from tags when enters or leves the factory or hospital
- UWB gateway record the entering and leaving time, and indicate battery state

PRINCIPLE

TAG   TAG

UWB wireless

Tag to tag distance

T_{SP} Inquiry ID T_{RP}

T_{RSP}

T_{RR} Response T_{SR}

T_{RSP}

T_{SF} Final information (ID, T_{SP}, T_{RR}, T_{SF}) T_{RF}
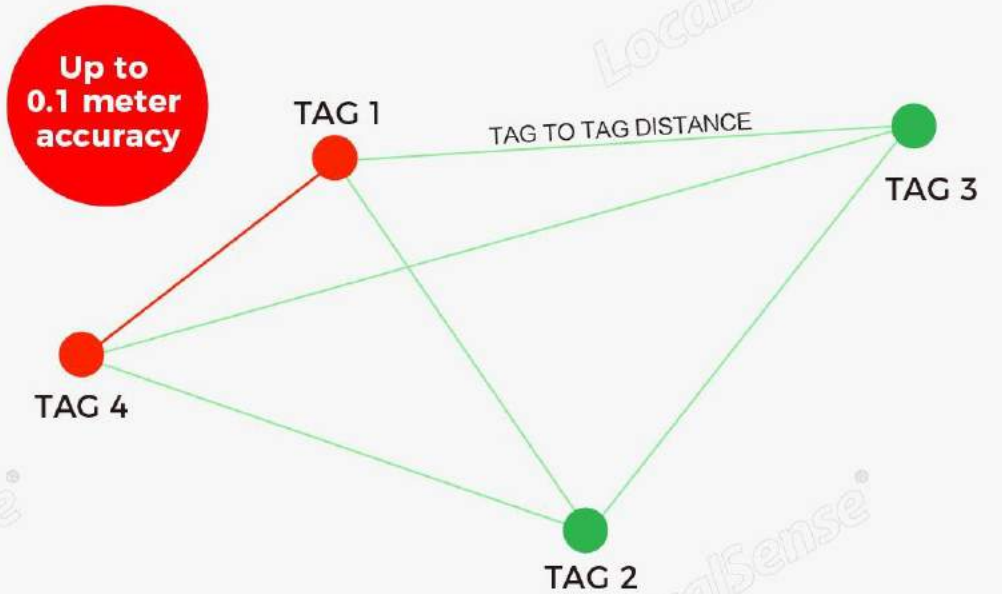
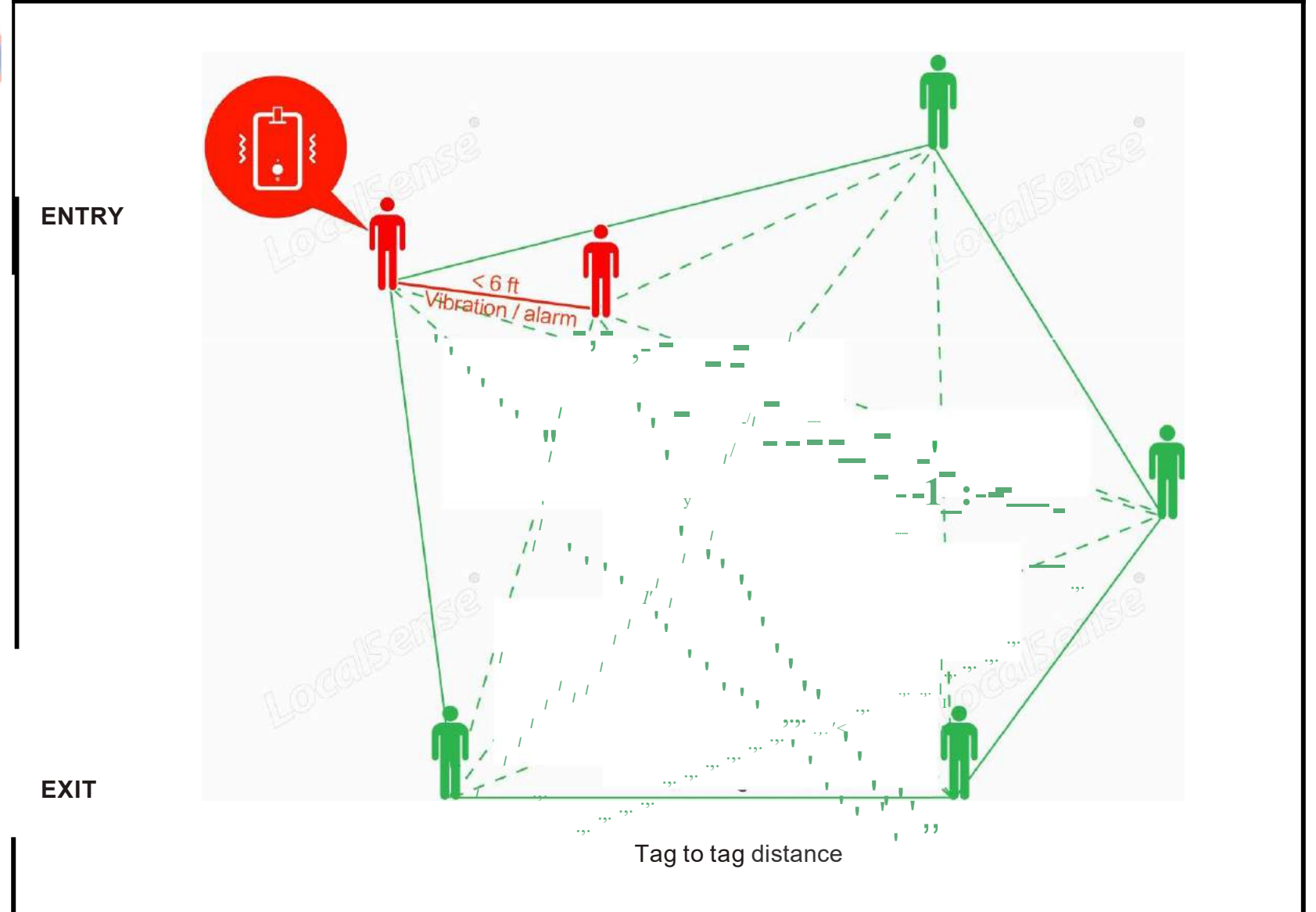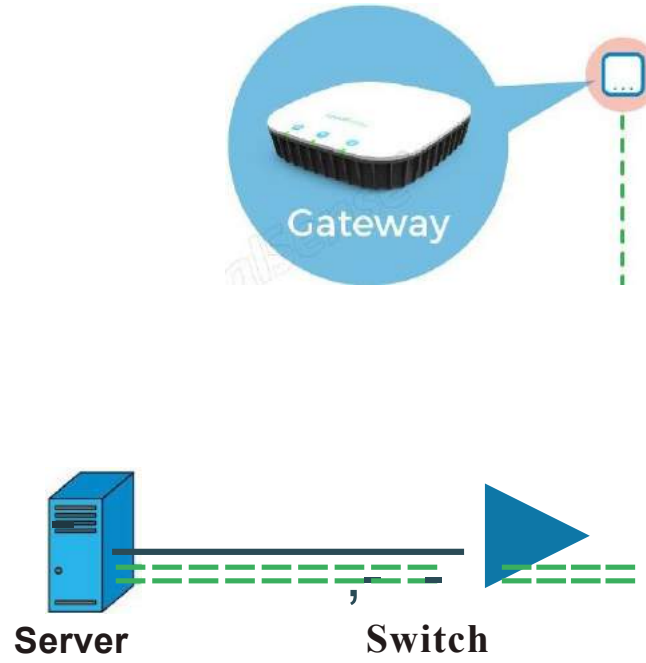Tag to tag distance   The pulse speed is equal to speed of light

$$D = C \times TOF$$

$$TOF = \frac{(2T_{RR} - T_{SP} - 2T_{SR} + T_{RP} + T_{RF} - T_{SF})}{4}$$

Tags ranging with each other, calculate real time distance

Up to 0.1 meter accuracy

TAG 1

TAG TO TAG DISTANCE

TAG 3

TAG 4

TAG 2

SYSTEM OVERVIEW

Gateway

Server

Switch

ENTRY

EXIT

0

< 6 ft
Vibration / alarm

Tag to tag distance

FEATURES

LocaSense ®

HIGH ACCURACY

Up to 0.1m
ranging accuracy

LOW POWER

Battery provide
more than 12h power

MUTIPLE RANGING

Smart mutipie
ranging in real time

HIGH CAPACITY

Total tag volume unlimited
more than 40 people
in small space supported

LARGE STORAGE CAPACITY

Storage more than 1000
contact records in tag

SMART DATA COLLECTION

Gateway can be placed
anyway to collect recorded data

UWB TAG & UWB GATEWAY

Gateway

Receive Contact Rocord and Config tags

Ranging with other tags

U3000-t

Data interface: Standard Ethernet

Power interface : POE/DC24V

Working temperature: -20 - 70t:
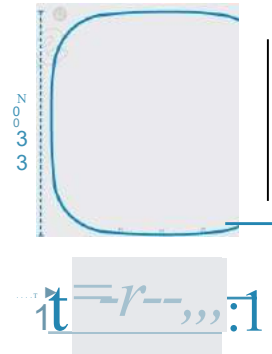
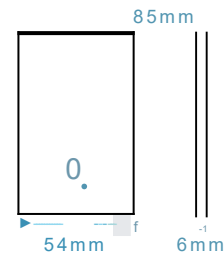### Tb1000-a

Battery type : Rechargeable LI

Working hours: battery recharge every 12h (usb type c port)

Working temperature: -20 - 70℃

Storage temperature: -40 - 85t:

Working humidity: 10 - 90% no condensation

85mm

54mm   6mm

@ **Buzzer**

@ **Vibrator**

@ **Button**

(Muse l 0 second/ Battery inspect)

Tb1000-w

Battery type : Rechargeable LI

Working hours: battery recharge every 12h (magnet port)

Working temperature: -20 - 70t:

Storage temperature: -40 - 85℃

Working humidity: 10 - 90% no condensation

Waterproof rating : IP65

@ **Buzzer**

@ **Vibrator**

@ **Button**

(Muse 10 second/ Battery inspect)

40mm   16.5mm

SOFTWARE

RECORD THE CONTACTS

Record ID. name and time of including incident within 6ft.
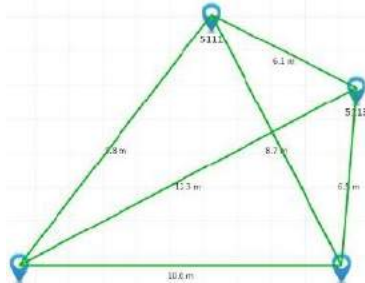
Search incident n mutiple ways.

SOFTWARE

Switch Base

This is a testinq mode only for tags around qateway to shew real time ranqinq distance in qra ph, and in this real time data t-ansmitting mode, :>nly less than 10 tags mapping is supported, the testingmode wil suspendif more than 10 tags aroundthe gateway detected

REAL TIME RANING (TEST MODE)

Receive realtime distance between tags and display. the UWB gateway should be around tag s. this is for testing mode. under working mode only ranging data less than 6ft would be recorded in t ags.

Loco/Sense®

flre   FIRA CONTRIBUTOR MEMBER

We   UWB   ALLIANCE MEMBER

Beijing
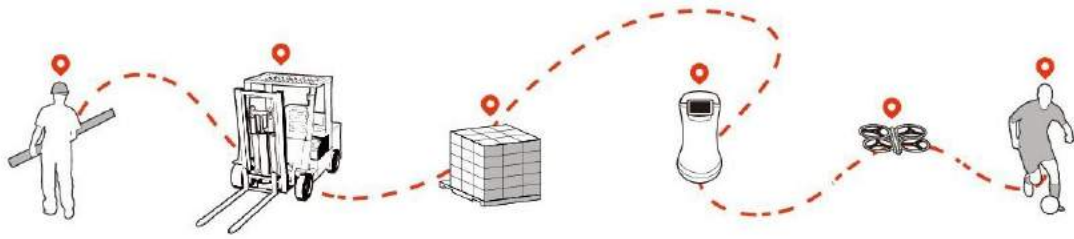
Tsingoal is a leading precise ranging / locating solution provider, a spin-off of Tsinghua university. Tsingoal is the first to bring it's 0.1m accuracy locating system with high stablity in China, have already installed more than 1200 systems in over 500 users.

With the experience over 6 years in UWB, Tsingoal rapidly developed the Covid19 social distancing and contact tracing system "LocalSense" on existing hardware for normal locating system, the LocalSense system for Covid19 is now success-fuly applied in more than 20 large corporations around the world, helping recovery from shutting down.

OVER 1,200 CASES OF
LocalSense®

THANKS

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