Sign-up and Tracker registration (battery inserting in the last step!)

1. Go to https://app.chipfox.cz sign-up and create your user account
2. Click on > Add Tracker
3. If you have camera on your device, scan QR code included in the package or enter Registration code manually.
4. Registration to Sigfox network can take few minutes, please follow displayed instructions.
   Tracker is now registered on your account and you can change its initial setting.
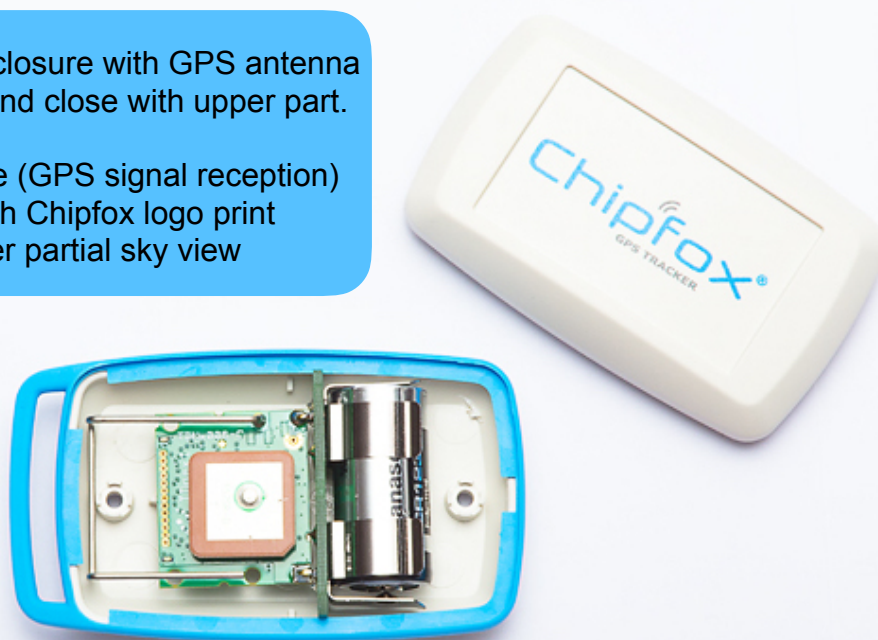5. When new-custom setting is done (or you use initial) **insert battery**. Please observe polarity.

Green LED starts flashing. When green LED stops, new setting was accepted and Tracker is configured.

When red LED lights up, new setting wasn't received, probably due to poor signal. Please remove battery and insert again outside the building.

Important note: Tracker setting can be changed 1× per day - 24h (IoT Network restriction)

Place Tracker back in the enclosure with GPS antenna pointing upwards (pictured) and close with upper part.

For best Tracker performance (GPS signal reception) always try to place device with Chipfox logo print upward allowing GPS receiver partial sky view
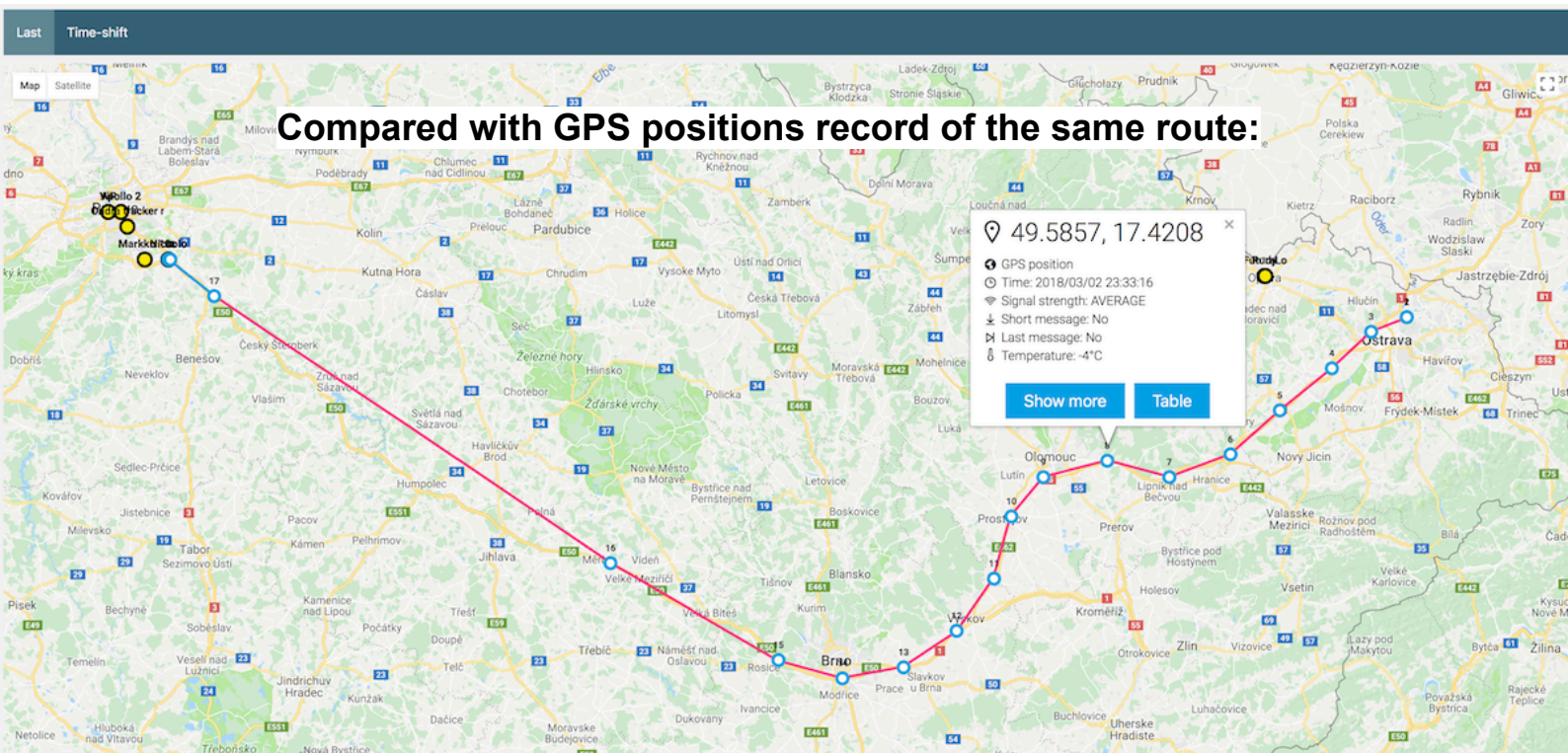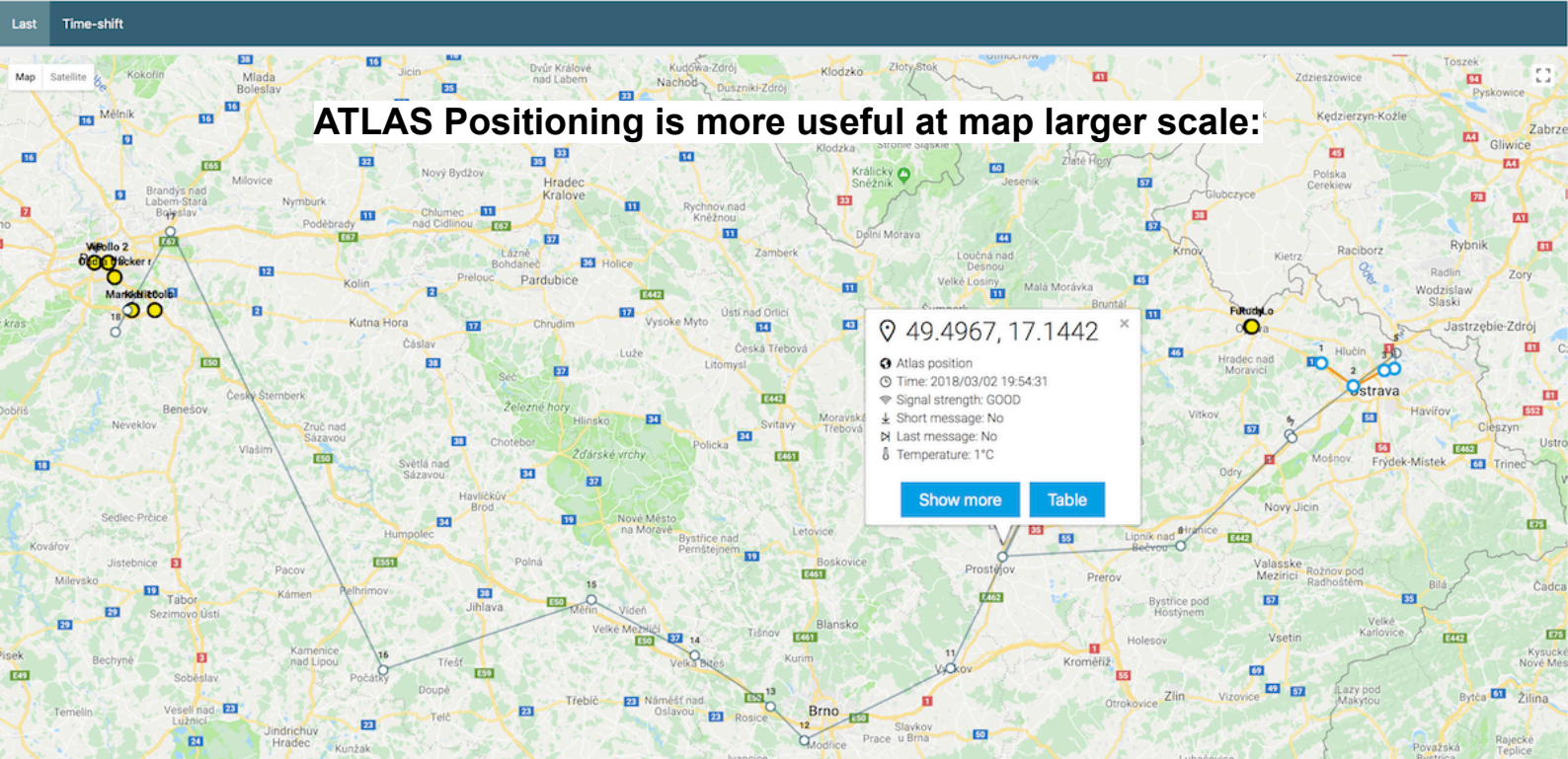

Tracker initial setting

- Tracker is activated from deep-sleep by **detected movement lasting longer than 45s**
- Position update is set to shortest period possible - **10min**
- **5 min** after stopping the **last position** is send
- Service message is sent once a day with **temperature and battery voltage**

Tracker basic settings

- You can set Tracker name and position update interval from 10 min up to 10 days
- To receive new setting Tracker must be restarted by battery removal. Setting can be changed once per 24 hours. (IoT network restriction). After restart Green LED starts flashing and then stops > OK.
- Coming soon - **Tracker colours and tracking modes** - device activation by long-lasting movement and long-lasting idle
- Coming soon - **Advanced settings** - energy saving functions, GPS setting, Accelerometer setting

Settings for 207B13

Basic settings

Tracker name	**Mode**
White ✏	Tracking ⚙
Tracker color	**Interval**
Blue `soon`	10 minutes 🕐

Save settings

Advanced settings `soon`

GPS & ATLAS positioning

There are **two methods** of getting the Tracker's position :

- GPS satellite - **accurate positioning** -device needs partial sky-view for receiving satellite data (not shielded with metal roof etc)

- ATLAS - Sigfox network calculated position - **approximate positioning**. This method works also indoor without sky-view

Significant accuracy improvement in Atlas positioning is being planned in Sigfox Network
From today's 500-5000m up to 50-500m in near future

Global Positioning System
- Accuracy up to 2.5 meters
- Sky-view is necessary for GPS data acquisition
- GPS performance can be affected by weather conditions, such is snow, fog etc

Sigfox Atlas positioning
- Accuracy 100-5000 meters
- Position accuracy depends on density of Base Stations
- In the cities is more accurate than in remote location
- Accuracy improvement planned by Sigfox

Reading GPS & ATLAS last positions in the map

🟢 Green: last known GPS or ATLAS position not older than message interval (10min in the initial sett.)

🟡 Yellow: last known GPS or ATLAS position not older than 24 hours

🟠 Orange: last known GPS or ATLAS position not older than 1 week

🔴 Red: last known GPS or ATLAS position older then week

ATLAS Positioning is more useful at map larger scale:

⊘ 49.4967, 17.1442 ✕
🌐 Atlas position
🕒 Time: 2018/03/02 19:54:31
📶 Signal strength: GOOD
⬇ Short message: No
▷ Last message: No
🌡 Temperature: 1°C

[Show more] [Table]

Compared with GPS positions record of the same route:

⊘ 49.5857, 17.4208 ✕
🌐 GPS position
🕒 Time: 2018/03/02 23:33:16
📶 Signal strength: AVERAGE
⬇ Short message: No
▷ Last message: No
🌡 Temperature: -4°C

[Show more] [Table]

WebApp Data table

- TIME - clicking on the row will display Tracker position at particular time
- METHOD - GPS or Atlas position geolocation, filtering in the table and the map
- SHORT MESSAGE - custom configured messages without GPS
- LAST MESSAGE - last position send 5 minutes after Tracker stops
- ACQUISITION - time needed for GPS fixation
- SIGNAL - quality of signal
- SEQUENCE NUMBER - messages numbering from the oldest to the most recent. If there is a gap (one ore more numbers are missing) these messages were not delivered to Sigfox Backend (probably due to poor signal)

Service message - 1x per day - marked green - sends battery voltage & temperature

Data from Markku 10

Last	Time-shift									Show more

▾ Time	⇕ Method	⇕ Latitude	⇕ Longitude	⇕ Temperature	⇕ Short message	⇕ Last message	⇕ Acquisition	⇕ Signal	⇕ Seq. number
YYYY/MM/DD	Select ▾				Select ▾	Select ▾		Select ▾	
2018/04/03 07:22:25	GPS	60.297826666667	24.852265666667	18	No	No	10	GOOD	934
2018/04/03 07:03:44	Atlas	60.460110173799	24.840380166847	23	No	No	90	AVERAGE	932
2018/04/02 10:00:52	GPS	60.390641666667	24.698061666667	20	No	Yes	8	LIMIT	931
2018/04/02 09:35:58	Atlas	60.370846979489	24.815787888362	18	No	No	14	LIMIT	929

Reading Tracker's history in the map

○ **GPS positions**   coloured connecting lines (colours are changing)

○ **ATLAS positions**   grey connecting lines (stay always grey)

Colours of GPS positions are changing when time elapsed between two points is longer then 4x message interval (4x10min in initial setting)

Previous GPS point always connects with the **following GPS point** by connecting line.

Map   🔍 Search by name

Hide Atlas	Last	Time-shift

⊙ 50.0804, 14.5362   ✕
⊕ GPS position
🕐 Time: 2018/04/05 12:03:33
📶 Signal strength: EXCELLENT
↓ Short message: No
✉ Last message: Yes
🌡 Temperature: 17°C

[Show more] [Table]

Geofencing

- Go to **Geofences and add circle or polygon** to the map
- Drag to adjust geofence size
- **Click on geofence and set:**
1. Geofence name
2. Direction (entering or leaving geofence)
3. **Assign Tracker** to geofence
4. Save geofence

Geofence settings

Name
Name

Direction
From inside to outside

Trackers
marc verdaguer 251
Lava
Rudy
Apollo 2 XYZ

[Save] [Remove] [Cancel]

Battery status indicator

- Tracker sends battery voltage once per day with service message to display battery status in the app
- This is strongly affected by ambient temperature, battery level can drop at minus temperatures and rise up again at room temperature. 10-15% drop of battery level is normal at the beginning of Tracker usage.
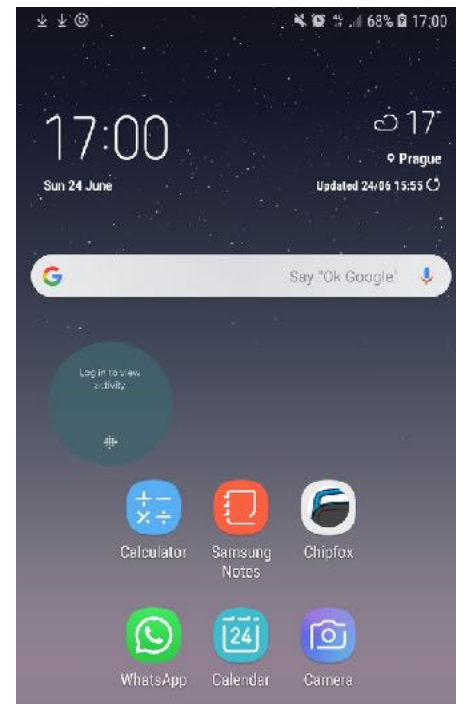
APP installation on Android & iOS

- Android - pop-up window with "add app" or manually save page (https://app.chipfox.cz) on desktop >create shortcut
- iOS - manually save page on desktop >create shortcut

System notifications

- MacOS + Safari
- Linux + Chrome
- Windows + Chrome, Firefox, Opera
- Notifications must be enabled in browsers
- Android
- iOS - not supported

Email notifications

- Supported by all OS

LOW POWER IoT DEVICE EXPLAINED
on 60min ride with 20min coffee break