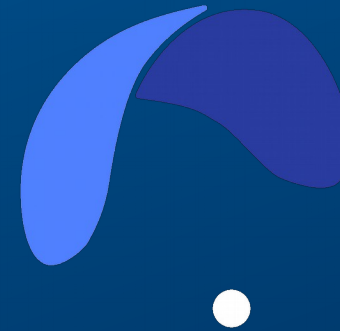


Application Development for Mobile and Ubiquitous Computing

GliderMate

A paragliding tracking app

Group 14: Jonathan Seitz

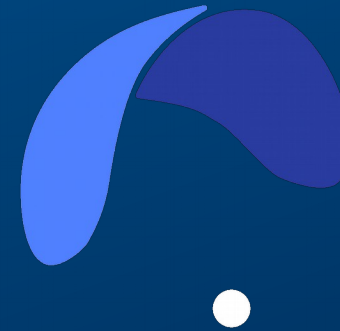




Context

Who needs it?

What is the use case?



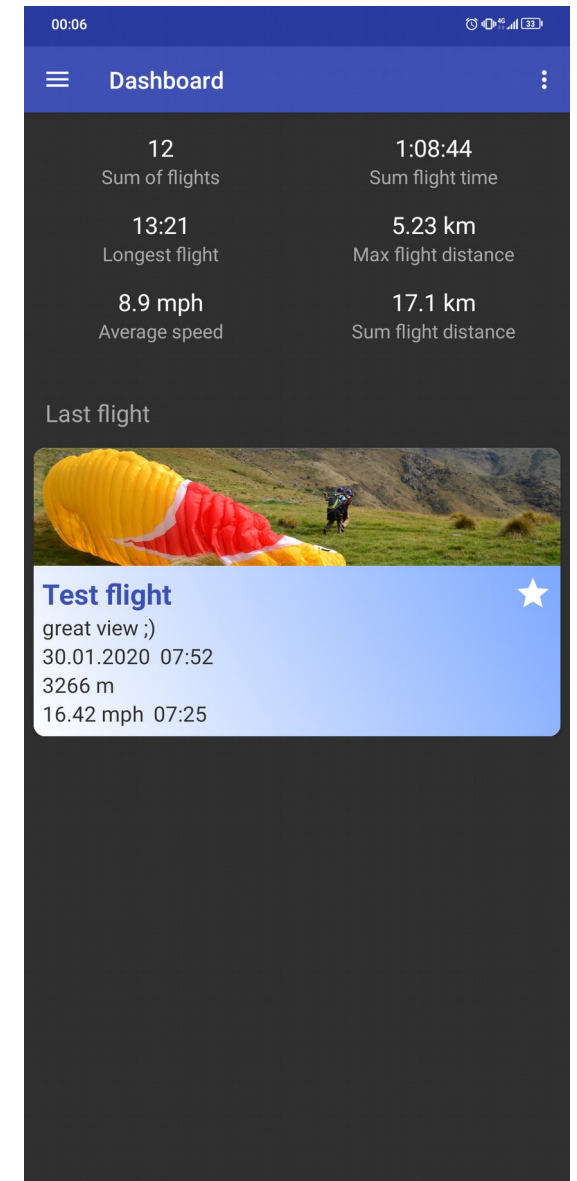


Use case - What is the app about?

A native Android-Application to support paraglider pilots during and after their flights.

Core features:

- During the flight:
 - Map view with current position marked
 - Compass
 - Track and store flights
 - Show essential flight information (speed, distance, height...)
 - After the flight:
 - Show flight route
 - Display flight summary (average speed, time, ...)
 - Settings:
 - Allow customization (speed unit, map zoom, gps precision...)
- **Target group: Paraglider pilots**
- **Benefits: safer flights, pilot support, fun...**





Why do they need an app for it?

There are special devices for this use case.



[1]



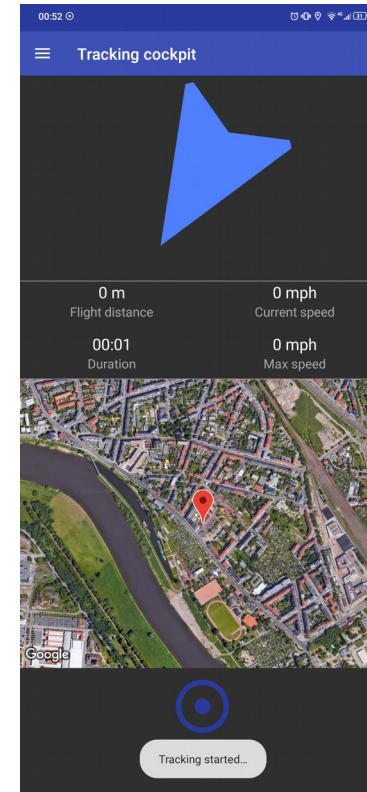
Why do they need an app for it?

There are special devices for this use case.



[1]

VS





Why do they need an app for it?

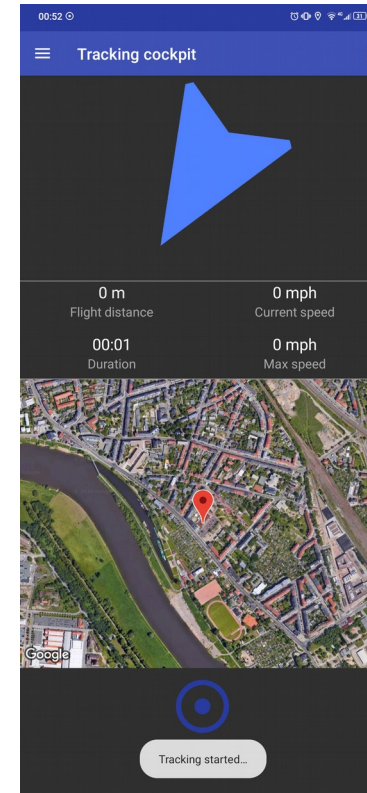
There are special devices for this use case.



[1]

599€

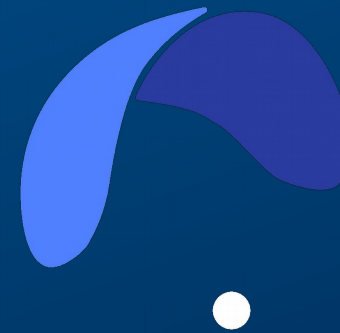
VS



0€

App presentation

Screenshots and demo





Screenshots

10:18

Tracking cockpit

506 m
Flight distance

42.55 km/h
Current speed

00:47
Duration

45.85 km/h
Max speed

Google

01:02

Flight list

Great mountain view
27.01.2020 12:58
140 m
1.26 mph 04:09

Beautiful sunset flight ★
27.01.2020 12:53
205 m
2.61 mph 02:56

Test new wing
27.01.2020 12:44
1258 m
7.73 mph 06:04

Winter flight
Really cold up there...
17.01.2020 18:32

00:05

GliderMate

3266 m
Flight distance

16.42 mph
Avg speed

07:25
Duration

18.99 mph
Max speed

Google

Speed mph

0	5	10	15	20
0	100	200	300	400

Height m

90	100	110	120	130
0	100	200	300	400

00:06

Settings

General

Map type
Satellite

Use 3D map mode

Units

Speed unit
mph

Height unit
Meter

Distance unit
Meter / Kilometer

Tracking

Keep screen on during flight tracking

Map zoom

Enable smart battery tracking
Battery-dependent GPS precision.

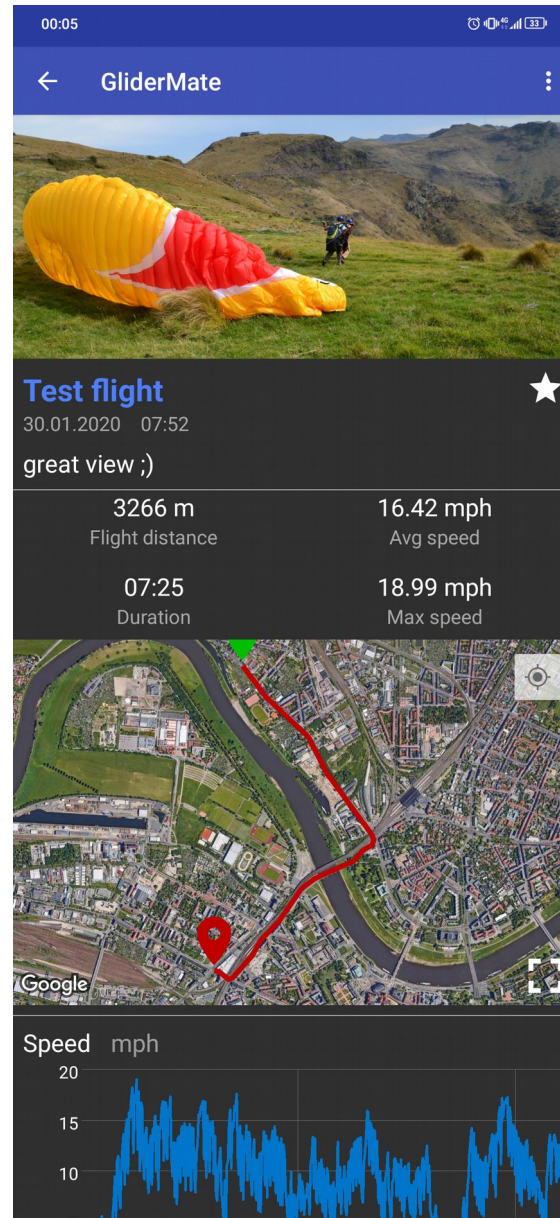
Manual GPS sampling frequency
Request GPS signal every 1 seconds.

Flight history

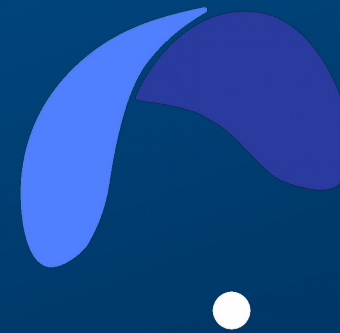
Show flight silhouette



Demo



Marketing concept





Why do they need an app for it?

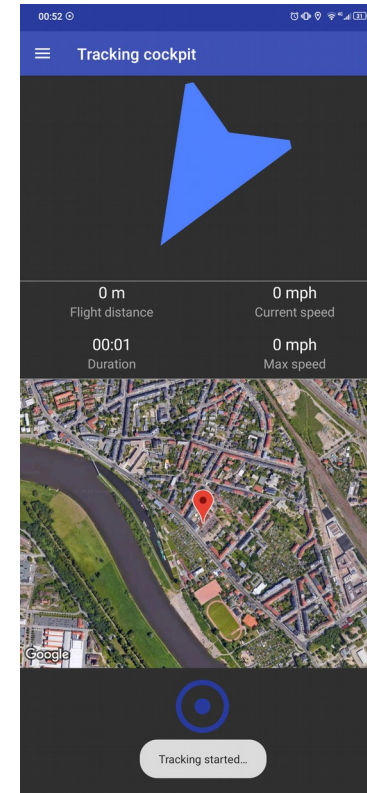
There are special devices for this use case.



[1]

599€

VS

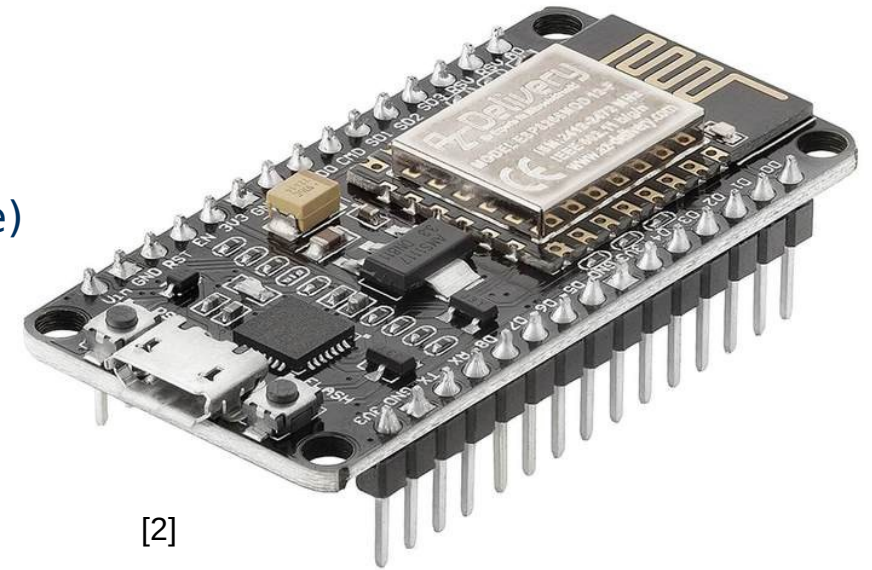


0€

Marketing concept & vision

The application is for free, but you can buy a toolbox with better sensors that the app can handle. The toolbox includes:

- Variometer
 - better GPS-Sensor
 - Connectionchip to connect sensors and phone
 - Power bank (handles the power consumption of sensors & phone)
- **Test everything and if you like it, you can buy precision**



[2]



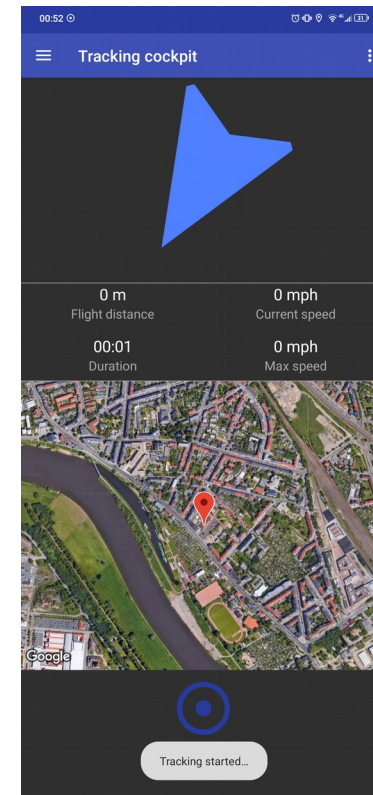
Why do they need an app for it?

There are special devices for this use case.

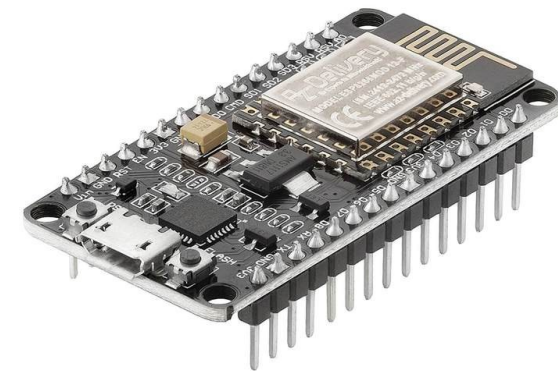


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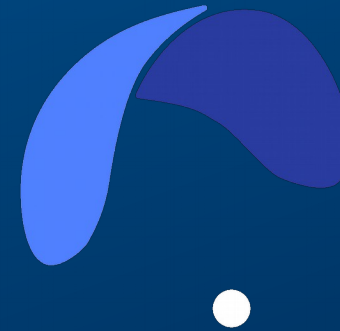
VS



60€



Discussion
Questions?
Feedback?
Ideas?







References

Images:

[1] https://www.para-zone.de/media/image/eb/2f/48/naviter-oudie-4-basic-44111-a10965_600x600.jpg

[2] https://cdn.shopify.com/s/files/1/1509/1638/products/1.Main_1x_NodeMCU_LUA_Amica_V2_Modul_mit_ESP8266_12E_1_Changed_1_x700.jpg?v=1576764570