

Easy Wardriving with IoT

PyDays 2018

\$whoami

- Martin Schmiedecker
- PhD in computer science from TU Wien
- Teaching “Digital Forensics” and “Privacy Enhancing Technologies”
- Certified expert witness

Private:

- Member of C3Wien
- Old-timer enthusiast
- Meme artist
- [@fr333k](#) (private)

Not much time!

IoT?

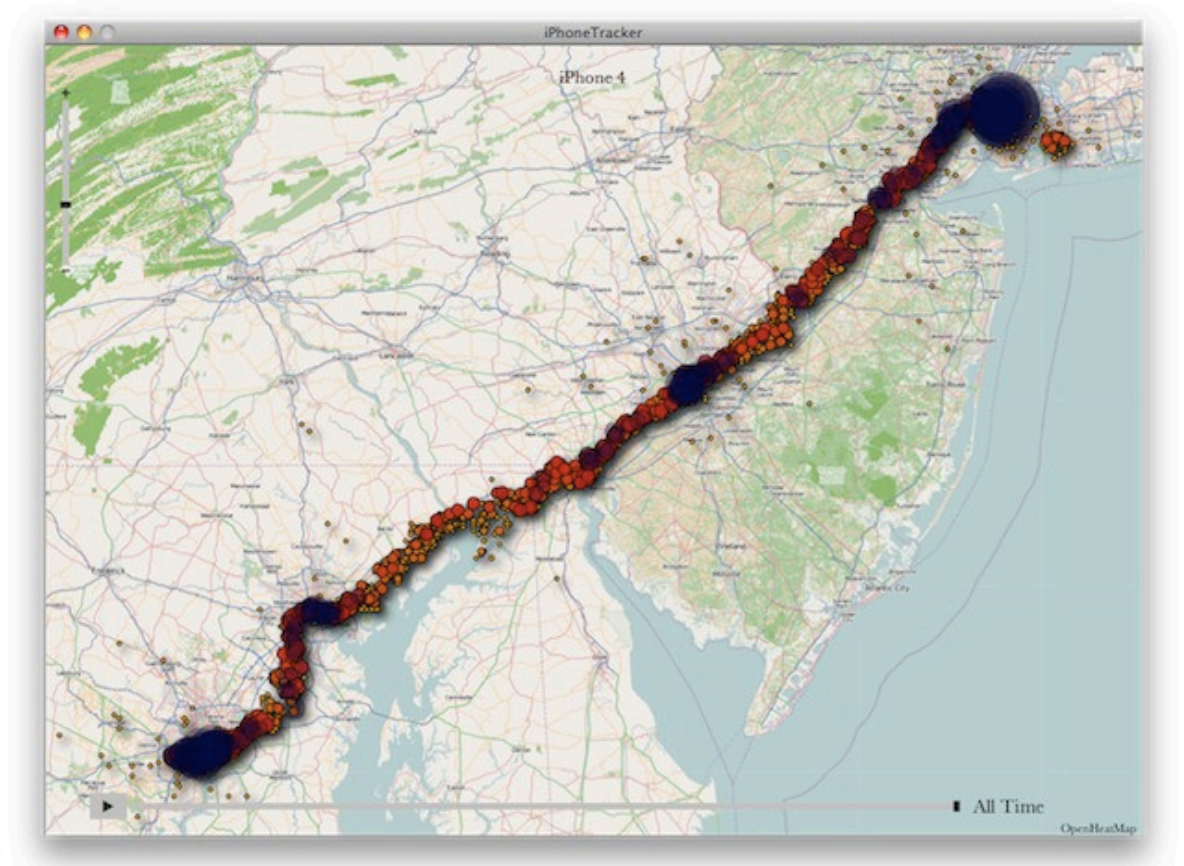
- Pytrack & LoPy4 shield
- From pycom.io, about 100€
- ESP32 with Micropython
- Also, RGB-LED 😊



What is Wardriving?

Used to be:

- Scanning for nearby WiFis
- open ones, and weakly protected
- Nowadays: geolocation
- Android / iPhone / ..., they all do it
- Remember “Locationgate”, sometime



Presenting: WARPY

What is warpy?

- Software for collecting it all!
- Store it on microSD card
- Roughly gets position every 4 seconds
- Code is on github:

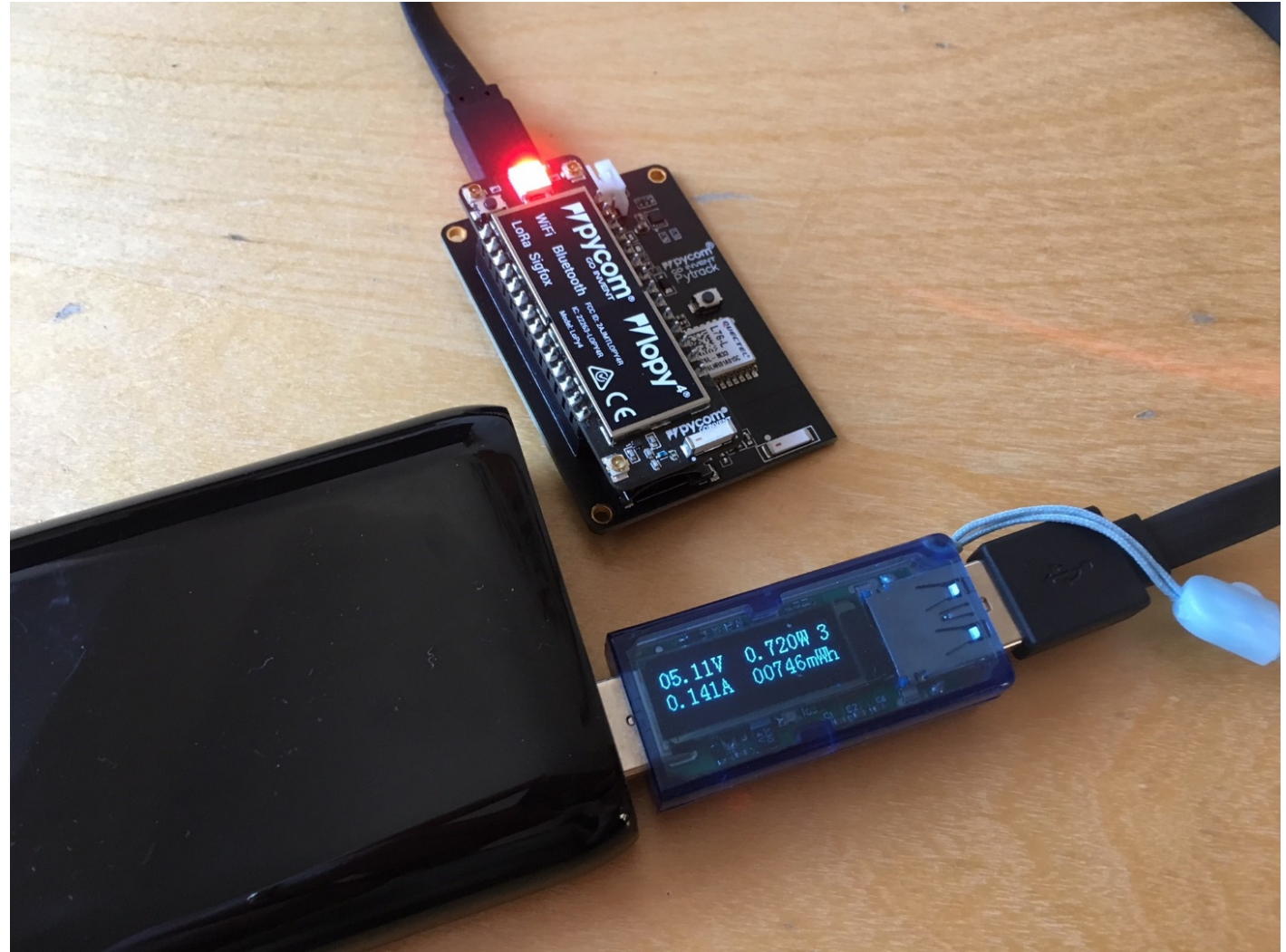
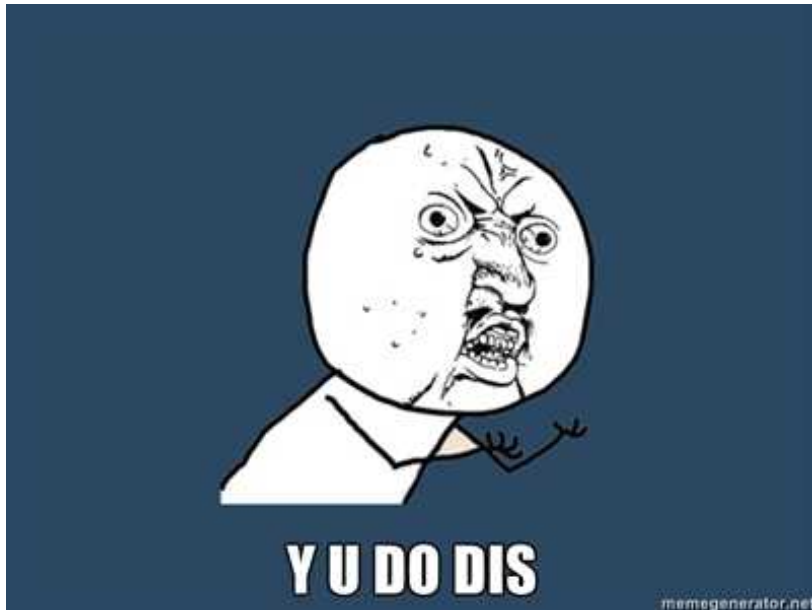
<https://github.com/palladionIT/warpy>



Presenting: WARPY

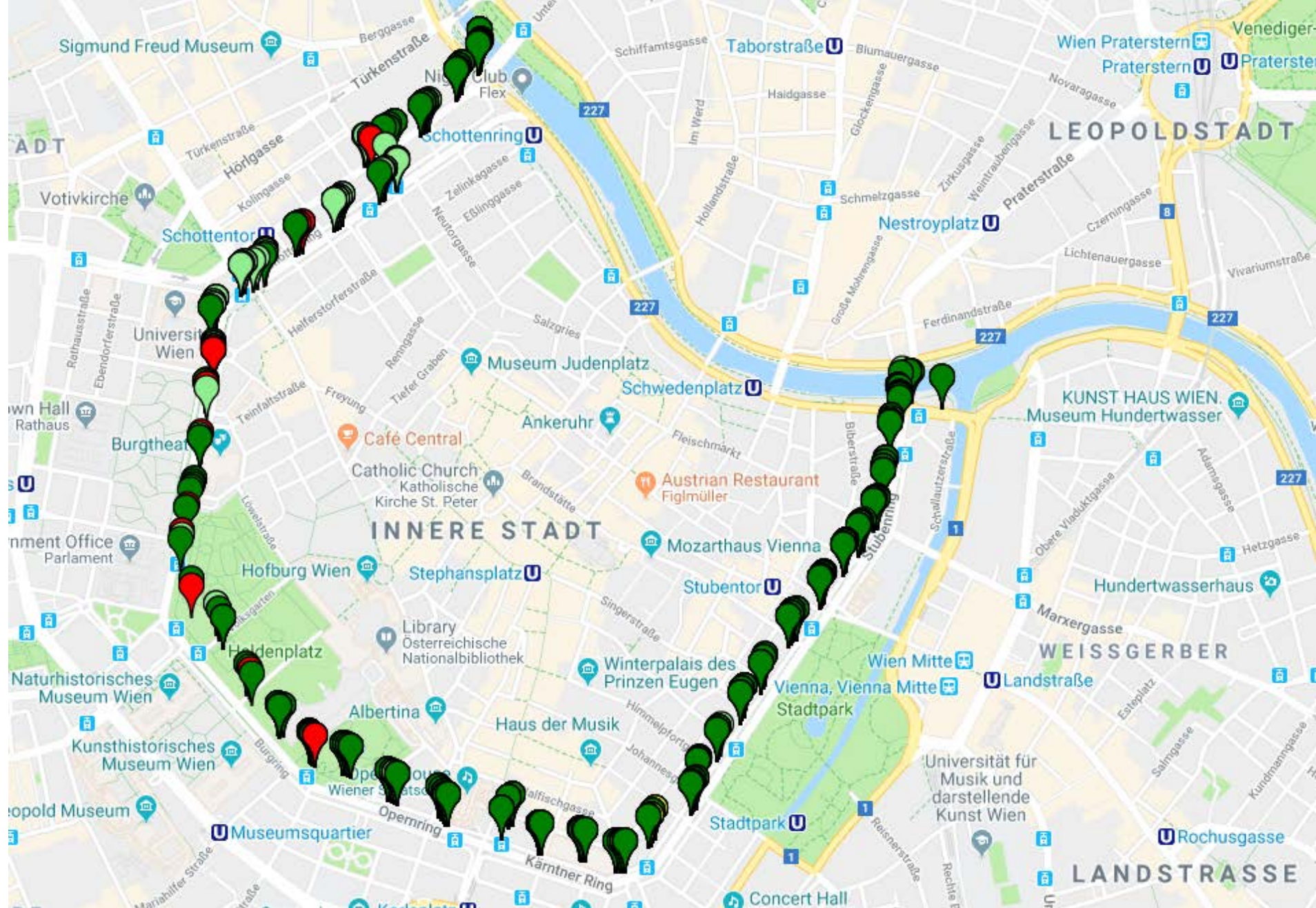
But Why?

- Power consumption!
- Not even 1 watt
- 100h+ with powerbank



Results Ring

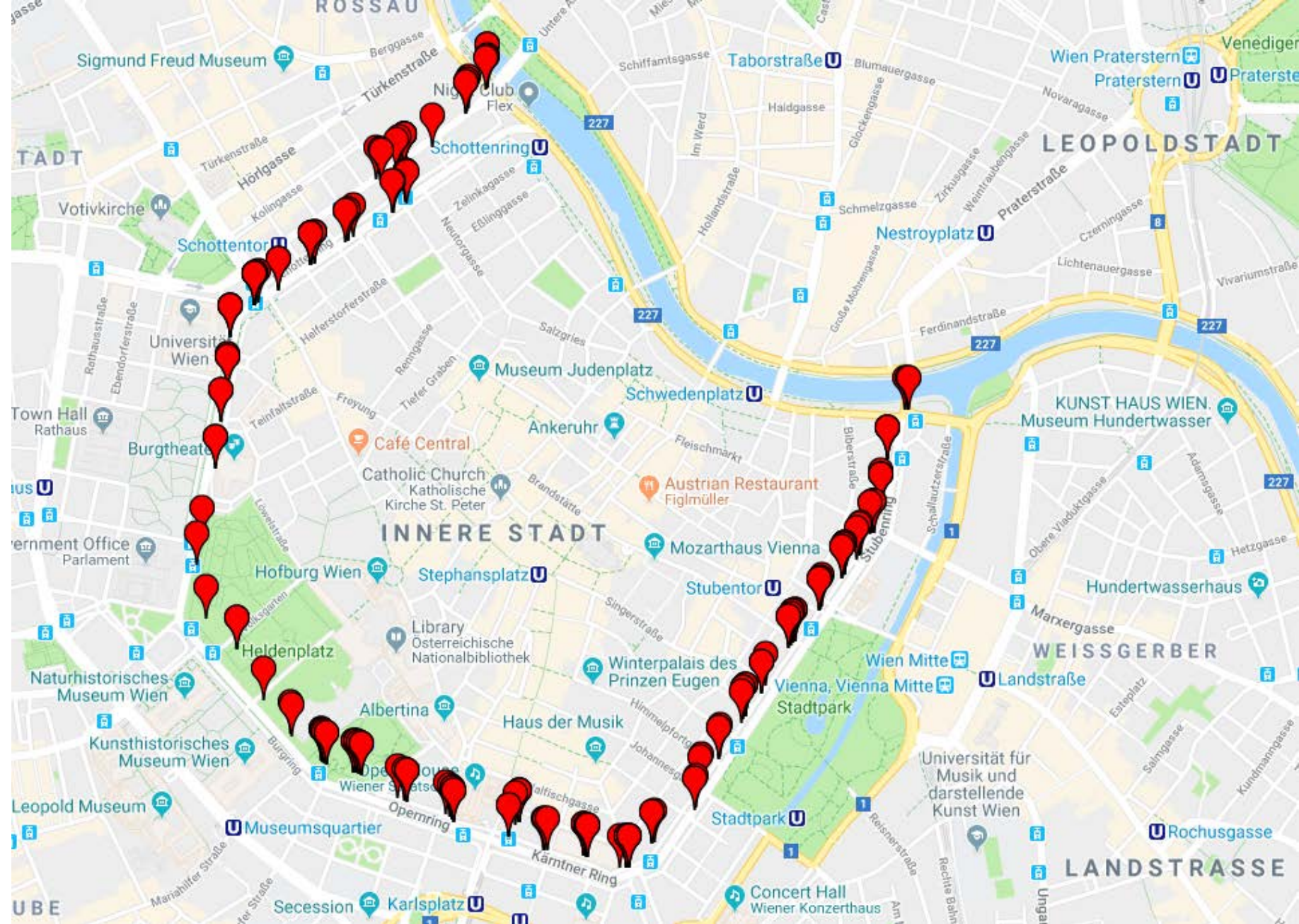
- ~1000 SSIDs
- 14 minutes



Results Ring

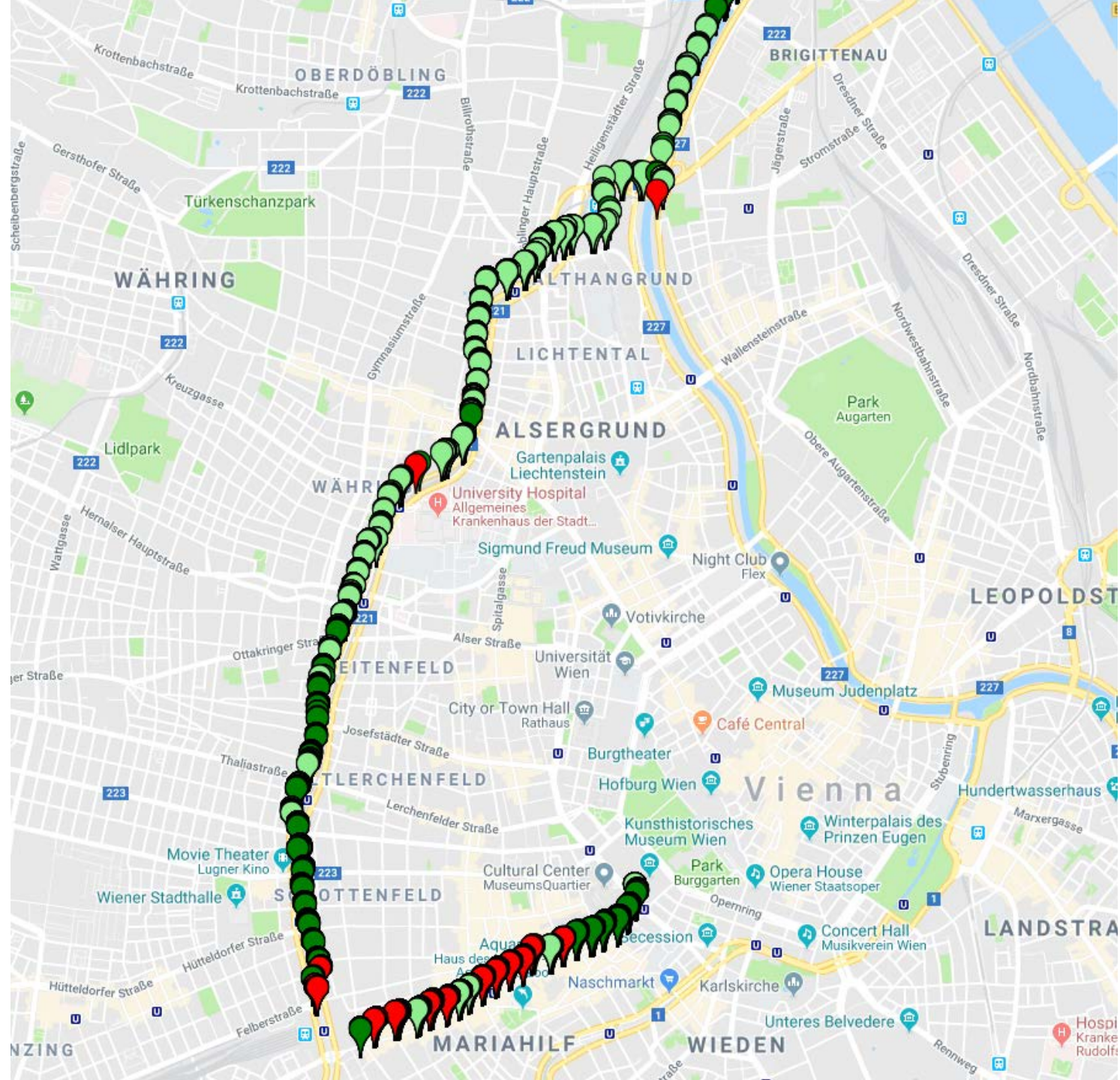
Here:

- Just open WIFIs



Results Gürtel

- ~2500 SSIDs
- 25 minutes



Open issues

- Accuracy of GPS unknown
- “Smarter” collection strategy needed
- Upload to wiggle / export to public
- Map Vienna!

Special thanks to ...

- [@palladionIT](#)
- [@priordice](#)

Get the code here:

- <https://github.com/palladionIT/warpy>