

FIRE SERVICE FACILITY, CZECHIA

MESH & TRACKING CAPABILITIES IN BASEMENT



OBJECTIVE

Show the indoor tracking working in an underground scenario where there is no GPS or cellular connectivity. Two firefighters, each fitted with a **mesh radio** and Thesia **tracker** enter the facility and move around - walk, crawl - as if in real life scenario. Data, video and voice used.

EQUIPMENT USED

Thesia trackers (1 per person)

HyphaRexMesh Kit:

- HyphaMap outside
- 3x 500mW HyphaCap radio units inside
- 2x PPT 500mW radios (1 per person)



TEST 1: FROM INSIDE BUILDING DOWN IN TO BASEMENT, ALONG CORRIDORS AND ADJOINING ROOMS, AND OUTSIDE

Two firefighters start in the building at ground level and proceeded downstairs, through a number of angled corridors and proceeded along the corridor into rooms off it. They came back up and walked around the outside of the facility.

Total paths:

- **Walker:** Distance walked; time walked
- **Walker 1:** 562m; 22:20mm:ss
- **Walker 2:** 488m; 21:41mm:ss



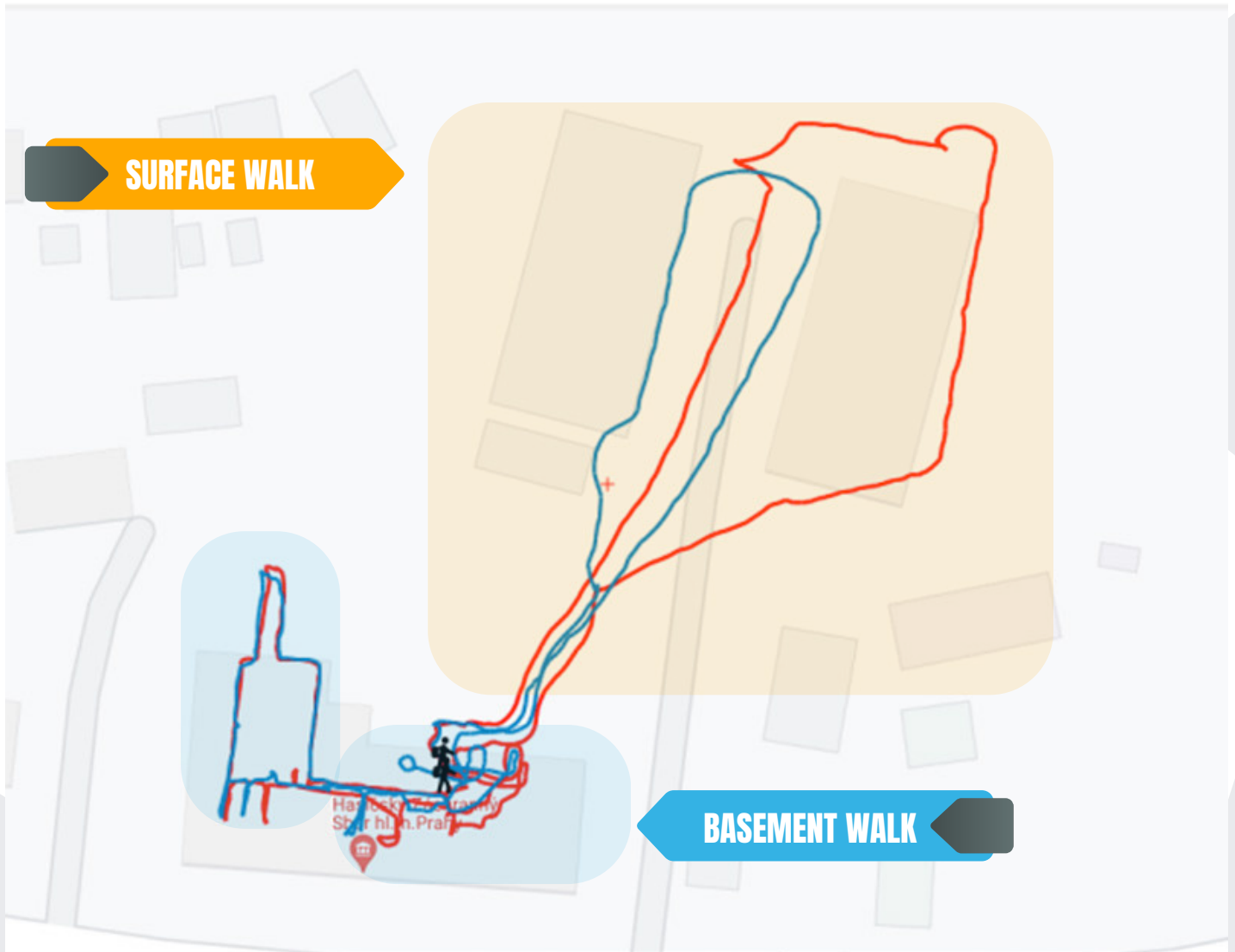
USER INTERFACE

UI showing:

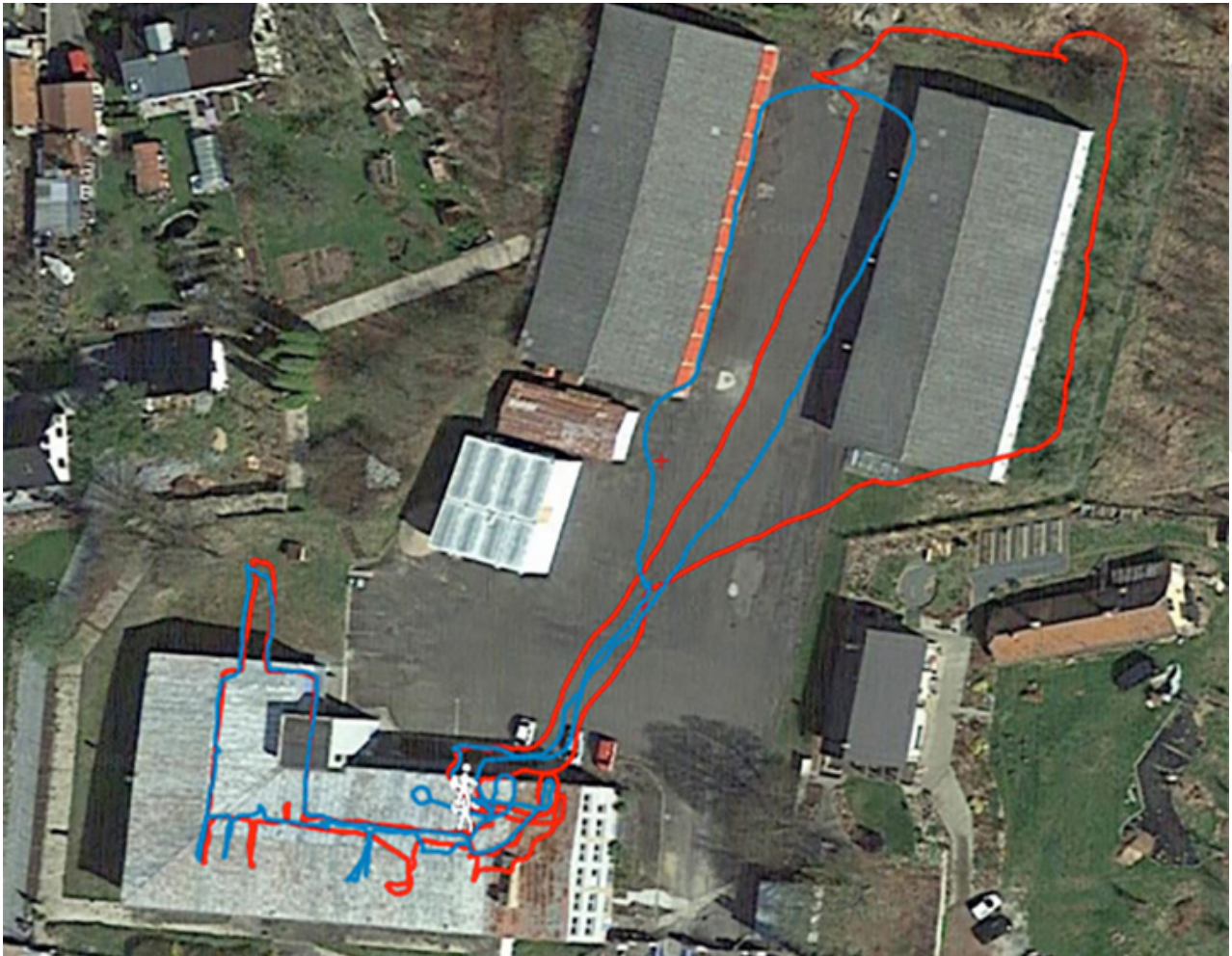
- Users (tracker wearers) on the left, 1 blue, 1 red
- Elevation of the walk on top
- Route overlaid on map

Note:

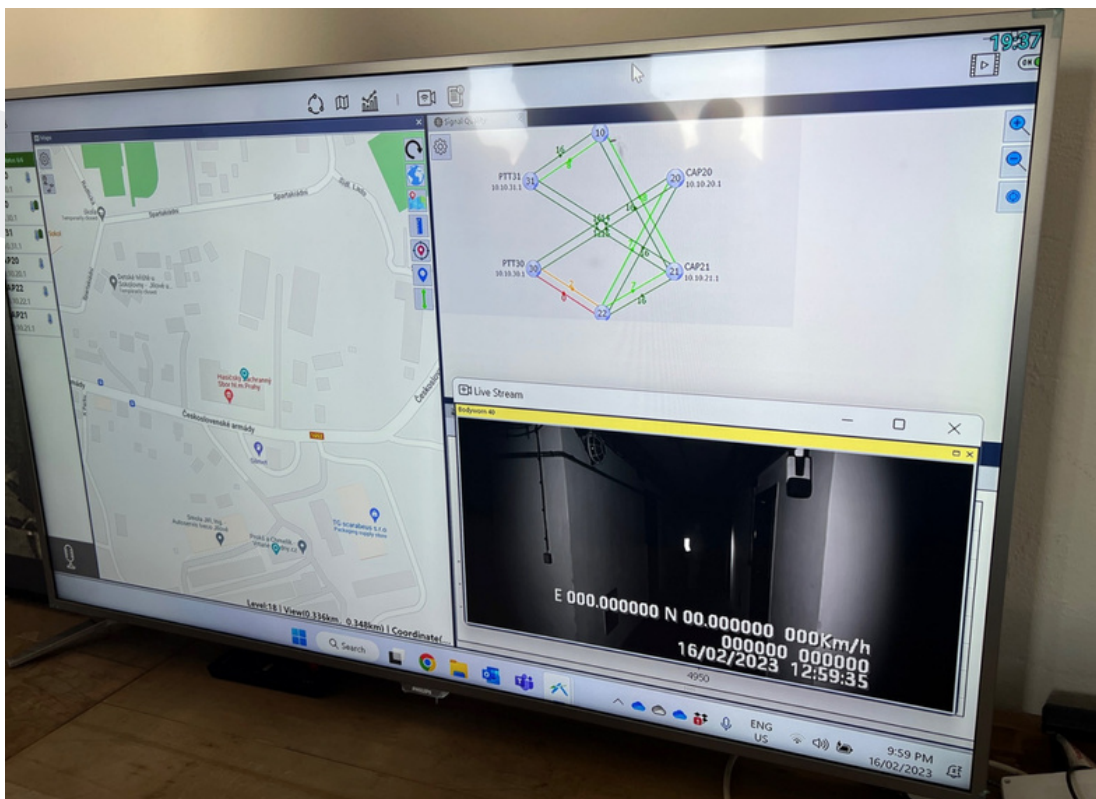
In places, basement area extends outside map/satellite footprint view.



ZOOM IN OF PREVIOUS PAGE



SATELLITE VIEW



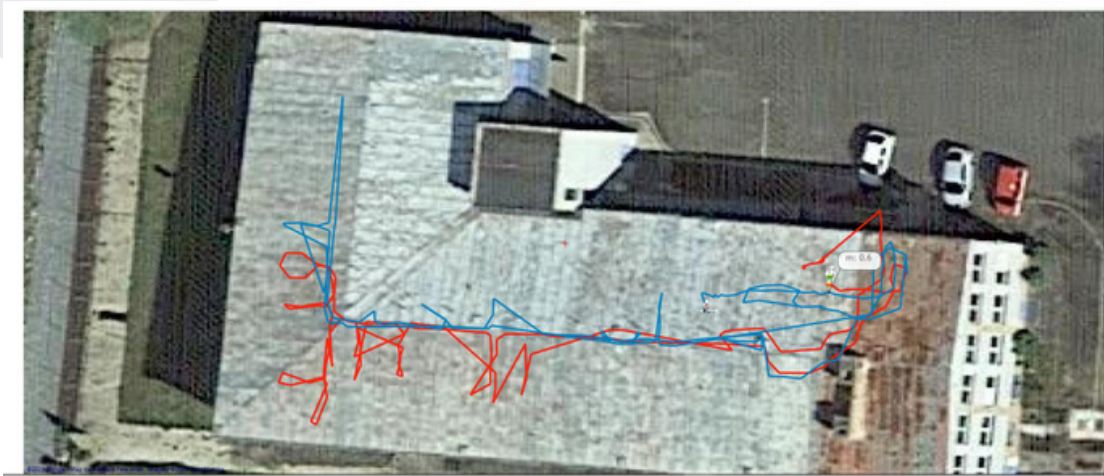
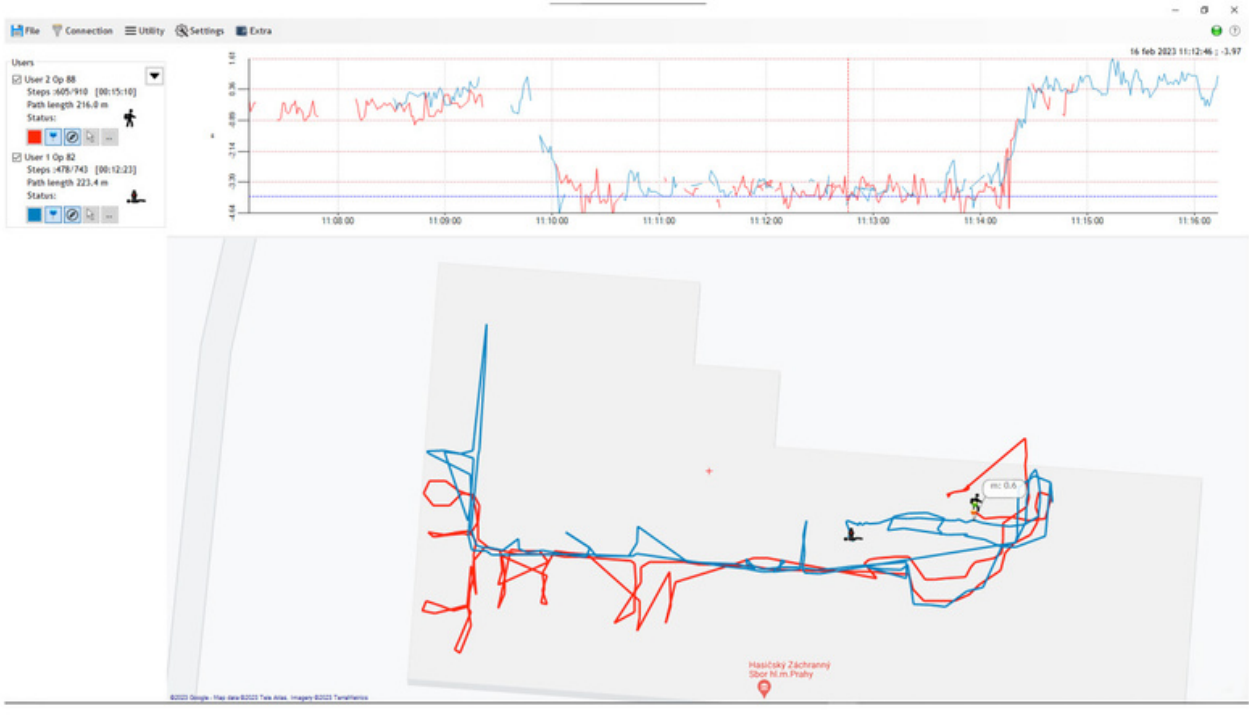
MESH NETWORK OF 6 RADIOS AND CAMERA IN DARK BASEMENT

TEST 2: INSIDE BUILDING DOWN IN TO BASEMENT, ALONG CORRIDORS AND ADJOINING ROOMS

A rerun of the first test, just doing the basement test.

Total paths:

- **Walker:** Distance walked; time walked
- **Walker 1:** 216m; 15:10mm:ss
- **Walker 2:** 223m; 12:23mm:ss

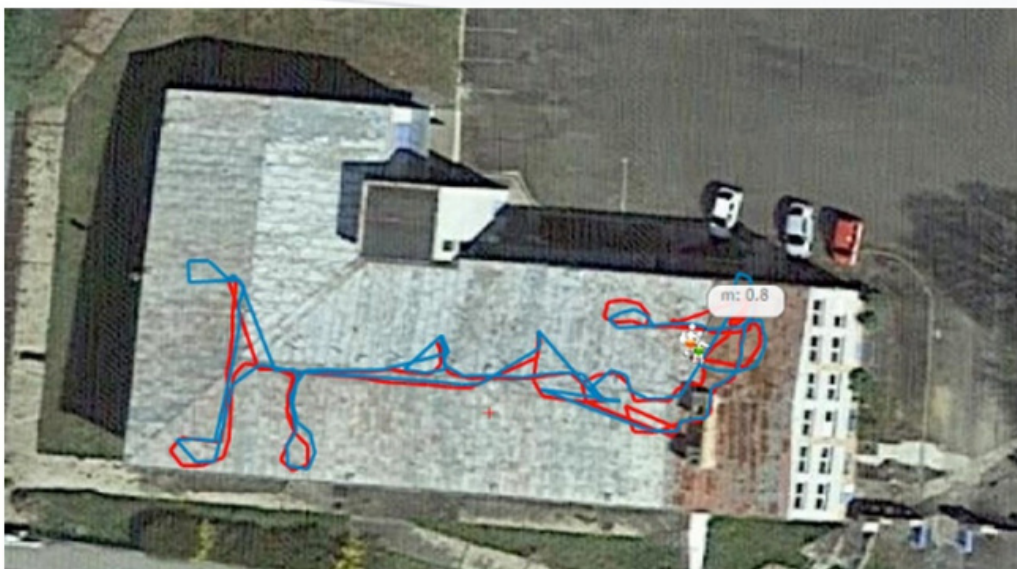


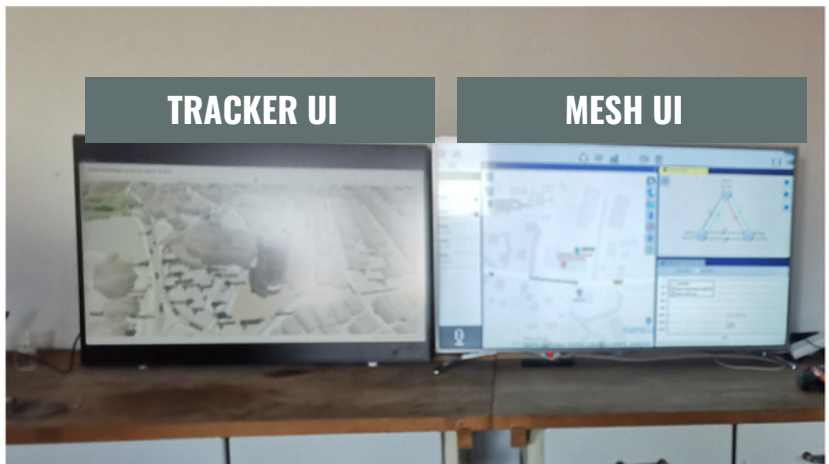
TEST 3: INSIDE BUILDING DOWN IN TO BASEMENT, ALONG CORRIDORS AND ADJOINING ROOMS WITH ONE USER

A rerun of the first test, just doing the basement test, with just ONE firefighter wearing two sensors.

Total paths:

- **Walker:** Distance walked; time walked
- **Walker 1, Tracker 1:** 230m; 08:04mm:ss
- **Walker 1, Tracker 2:** 227m; 07:52mm:ss





CONCLUSION

The trial of both the tracker and the mesh radio solution impressed, as a combined solution and as two standalone solutions.

The trial out preformed the competitors.



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