ANALYZING THE IN-SITU ACCURACY OF INDOOR-POSITIONING SYSTEMS DEPLOYMENTS

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INTRO

• **Indoor positioning systems** (IPS) are widely adopted by location-based services to track assets or humans in **closed environments** (ranging from small offices to railway stations).

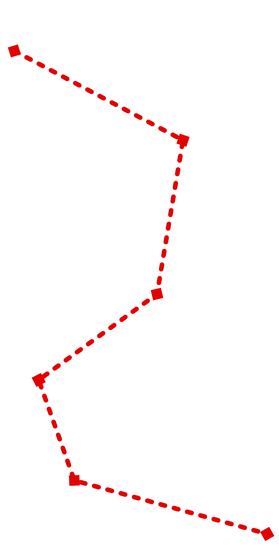
• However, once installed and configured, IPS may **report inappropriate locations**, because of various reasons such as configuration mistakes or building constraints.

QUESTIONS

HOW TO ACCURATELY MEASURE THE ERROR OF IPS?

HOW CAN WE OPTIMIZE AN IPS DEPLOYED IN THE WILD?

TOOLS AND METHODS



REFERENCE PATH DRAWING

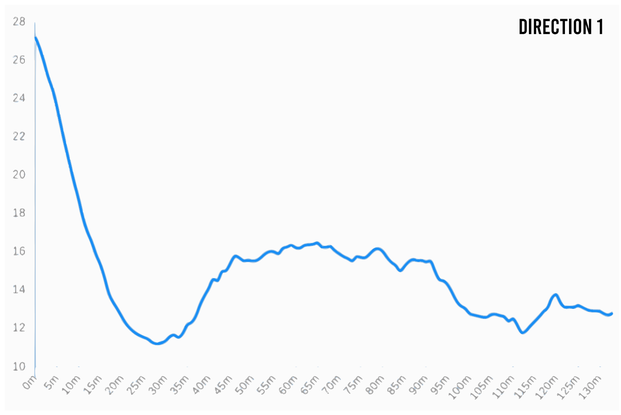
GROUND TRUTH PATHS CREATION

ON-SITE MEASUREMENTS

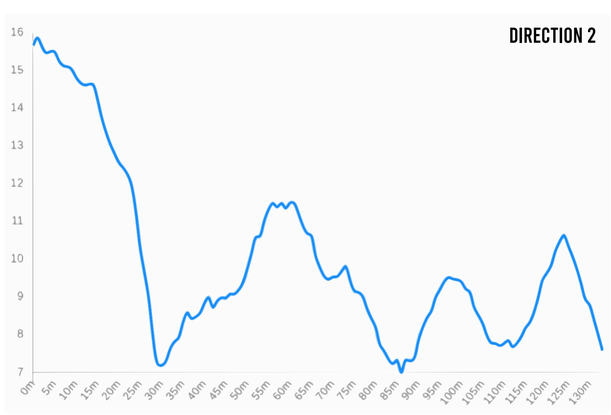
GATHERS DATA FROM IPS WITH ANDROID AND IOS DEVICES

RESULTS + DISCUSSION

AVERAGE ERROR PROGRESSION ALONGSIDE REFERENCE PATH



• Great inaccuracy at the **beginning** of runs.
• May be lowered by waiting before starting measurements?



• We observe an **average error raise** around **stairs**, but not in both directions.

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