No Need to War-Drive: Unsupervised Indoor Localization

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I. Basic Idea from the Past

GPS can correct outdoor paths. How can indoor paths be corrected (given GPS is unavailable)?

II. UnLoc Intuition

Certain locations in an indoor environment present an identifiable signature.

III. UnLoc Technique

Users help in estimating landmark locations; landmarks help in estimating user locations. This is a recursive approach.

IV. Performance

Accuracy improves over time.

Tested in ECE and CS buildings and a shopping mall, UnLoc achieves 1.69 m online accuracy on average.