

SugarTrail Code Introduction

1 Phase 1: Signature Test

- Location:
 - Getting Data: \sugar\cluster\reading_testing
 - Analysis: \sugar\cluster\analysis\lab_signature
- Fig:
 - Stable reading for one node
 - Disturbed reading for one node
 - Relatively stable signature for one node
- Run: \sugar\cluster\analysis\lab_signature\sig_analysis.m

2 Phase 2: Distribution Table/Curve generate

- Location: \sugar\cluster\distribution
- Fig:
 - Relation of ranging distance and real distance
- Run:

3 Phase 3: Hallway Test

- Location: \sugar\cluster\hallway_simulation
- Fig:
 - Cluster
 - Navigation
 - Base number and performance
 - Cluster size threshold and performance
- Run: main.c

4 Phase 4 : Lab(Field Test)

- Location: \sugar\cluster\lab_field_test
- Fig: None
- Run: main.c

5 Phase 5: Lab(Database Test)

- Location: \sugar\cluster\lab_database
- Fig:
 - Clustering(path_length = 10000)
 - Navigaion
- Run:
 - p1_collect_readings.m (collecting data, done, don't run again)
 - p2_data_process.m (generate proper data structure for later, done, don't run again)
 - p3_generate_cluster.m
 - p4_match_area_to_cluter.m
 - p5_testing.m
 - p6_kmeans.m

6 Phase 6: Supermarket Experiment

- Location: \sugar\cluster\supermarket_exp
- Supermarket layout: supermarket.skp
- Data:
 - Raw Data: \sugar\cluster\supermarket_exp\step3\raw_data\
 - Complete Data and Documentation: \sugar\cluster\supermarket_exp\step3\complete_data\
- Fig:
 - Compass Direction
 - Clustering(path_length = 10000)
 - Navigation
- Run:
 - p1_collect_readings.m (collecting data, done, don't run again)
 - p2_data_process.m (generate proper data structure for later, done, don't run again)
 - draw_compass_direction.m
 - p3_generate_cluster.m
 - p4_testing.m