Detailed description of LogFiles and supplementary materials for the Track 3 IPIN competition

This document explains the database files available at http://indoorloc.uji.es/ipin2016track3/ made available to competitors for track 3 IPIN competition and the detailed description of CFC of track 3 available at http://www3.uah.es/ipin2016/docs/Track3_IPIN2016Competition.pdf .

Number of Buildings:

A total of 4 different buildings will be tested. The competitors will be required to train and test the positioning performance in all 4 buildings. The goal is to test the generality and adaptability of competitor's algorithms to different environment conditions. A short description of these buildings, and their ID numbers, is shown below:

1. UAH (ID 20): the one where the on-site competition will take place at IPIN2016 Conference (Polytechnic Building at UAH, Alcalá de Henares, Spain) although in a different sector (East sector). This building has 4 levels (0, 1, 2 and 3).

2. CAR (ID 10): Main building of CAR center (CSIC, Arganda, Madrid, Spain). This building has only one level (0).

3. <u>UJIUB (ID 30)</u>: Building located at the University Jaume I (Castellón, Spain). This building has 6 levels (0,1, 2, 3, 4, 5)

4. <u>UJITI (ID 40):</u> Building located at the School of Technology from the University Jaume I (Castellón, Spain).). This building has 4 levels (0,1, 2, 3)

UAH: LogFiles and supplementary files available at database site

Site: http://indoorloc.uji.es/ipin2016track3/

- **Supplementary material:**

    o **Map floors** of building and calibration for geo-reference WGS-84:

        ▪ 4 jpg bitmaps for each floor and

        ▪ 1 calibration text file with "*.cal" extension (contains the Latitude, Longitude of central pixel in image, the image CCW rotation in order to be aligned to the North, and the scale of size of pixels).

    o **Routes** made available for training (pdfs with Ground-truth points available):

        ▪ Route 1: Moving in floors 0, 1 and 2 (67 ground truth points annotated).

        ▪ Route 2: Moving in floors 0 and 3 (64 ground truth points annotated)

        ▪ Route 4: Moving in floors 1 and 2 (29 ground truth points annotated)

    o **Videos** (some videos of the full or a section of the routes can be available)

- **LogFiles** with ground-truth inserted (POSI lines):

    o 2 log_files for route 1:

        ▪ logfile_UAH_R1_S4.txt   (using Samsung S4 phone)

        ▪ logfile_UAH_R1_S3.txt   (using Samsung S3 phone)

    o 2 log_files for route 2:

        ▪ logfile_UAH_R2_S4.txt   (using Samsung S4 phone)

        ▪ logfile_UAH_R2_S3.txt   (using Samsung S3 phone)

    o 2 log_files for route 4:

        ▪ logfile_UAH_R4_S4.txt   (using Samsung S4 phone)

        ▪ logfile_UAH_R4_S3.txt   (using Samsung S3 phone)

CAR: LogFiles and supplementary files available at database site

Site: http://indoorloc.uji.es/ipin2016track3/

- **Supplementary material:**

    o **Map floors** of building and calibration for geo-reference WGS-84:

        ▪ 1 jpg bitmaps for the floor and

        ▪ 1 calibration text file with "*.cal" extension (contains the Latitude, Longitude of central pixel in image, the image CCW rotation in order to be aligned to the North, and the scale of size of pixels).

    o **Routes** made available for training (pdfs with Ground-truth points available):

        ▪ Route 1: Moving in floor 0 (75 ground truth points annotated).

        ▪ Route 2: Moving in floor 0 (52 ground truth points annotated)

    o **Videos** (some videos of the full or a section of the routes can be available)

- **LogFiles** with ground-truth inserted (POSI lines):

    o 2 log_files for route 1:

        ▪ logfile_CAR_R1_S3.txt   (using Samsung S3 phone)

        ▪ logfile_CAR_R1_S3mini.txt   (using Samsung S3 mini phone)

    o 2 log_files for route 2:

        ▪ logfile2_CAR_S4.txt   (using Samsung S4 phone)

        ▪ logfile2_CAR_S3.txt   (using Samsung S3 phone)

UB/Espaitec-2: LogFiles and supplementary files available at database site

Site: http://indoorloc.uji.es/ipin2016track3/

- **Supplementary material:**

    o **Map floors** of building and calibration for geo-reference WGS-84:

        ▪ 5 jpg bitmaps for each floor and

        ▪ 1 calibration text file with "*.cal" extension (contains the Latitude, Longitude of central pixel in image, the image CCW rotation in order to be aligned to the North, and the scale of size of pixels).

    o **Routes** made available for training (pdfs with Ground-truth points available):

        ▪ Route 1n: Moving in floor 0, 1, 2, 3 , 4 and 5 (58 ground truth points annotated).

        ▪ Route 1r: Moving in floor 5, 4, 3, 2,1 and 0 (58 ground truth points annotated); The ground points are the same than for Route 1n, but they are reached in inverse order.

        ▪ Route 2n: Moving in floor 0, 1, 2, 3 , 4 and 5 (59 ground truth points annotated)

        ▪ Route 2r: Moving in floor 5, 4, 3, 2,1 and 0 (59 ground truth points annotated); The ground points are the same than for Route 2n, but they are reached in inverse order

        ▪ Route 3: Moving from floor 0 to 5 and back to 0 (60 ground truth points annotated)

    o **Videos** (some videos of the full or a section of the routes can be available)

- **LogFiles** with ground-truth inserted (POSI lines):

    o 2 log_files for route 1:

        ▪ logfile_UJIUB_R1n_S3.txt   (using Samsung S3 phone)

        ▪ logfile_UJIUB_R1r_S3.txt   (using Samsung S3 phone)

    o 2 log_files for route 2:

        ▪ logfile_UJIUB_R2n_S3.txt   (using Samsung S3 phone)

        ▪ logfile_UJIUB_R2r_S3.txt   (using Samsung S3 phone)

- o   1 log_files for route 3:
  - ▪   logfile_UJIUB_R3_S3.txt   (using Samsung S3 phone)

TD/TI: **LogFiles and supplementary files available at database site**

Site: http://indoorloc.uji.es/ipin2016track3/

- **Supplementary material:**

  o **Map floors** of building and calibration for geo-reference WGS-84:

    ▪ 5 jpg bitmaps for each floor and

    ▪ 1 calibration text file with "*.cal" extension (contains the Latitude, Longitude of central pixel in image, the image CCW rotation in order to be aligned to the North, and the scale of size of pixels).

  o **Routes** made available for training (pdfs with Ground-truth points available):

    ▪ Route 1: Moving in floors 1, 2, and 3 (360 ground truth points annotated).

    ▪ Route 2: Moving in floors 1, 2, and 3 (201 ground truth points annotated).

- **LogFiles** with ground-truth inserted (POSI lines):

  o 1 log_files for route 1:

    ▪ logfile_UJITI_R1_NEXUS5.txt   (using Google Nexus 5 phone)

  o 1 log_files for route 2:

    ▪ logfile_UJITI_R2_NEXUS5.txt   (using Google Nexus 5 phone)