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PerSense Light Demo / Task4.2
UMOBILE Plenary 2016, Xanthi

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PerSense Light, What for?

- Senception will use PerSense TM Light in task 4.2 to perform an analysis on data contextualization and on network mining aspects relevant to UMOBILE
  - PerSense TM Light is availablre via Google apps for free
  - Senception can agree to extend the tool to collect more parameters, requested by partners
- **Phase I – 2016 UMOBILE demo I (April 2016)**
  - Framework derived from smart data capture, characterization of social routines based on Wi-Fi footprinting
  - Data is kept local (SQLite) OR it can be sent to a specific server
- **Phase II – 2016 UMOBILE demo (December 2016) – v2.0**
  - Sociability forecasting software (Android)
  - User recommendations and prediction of conditions for social interaction to occur derived from shared interests, affinities, and wishes via the application of social indicators to forecast sociability in space and time
  - Usage context adapted to the UMOBILE architecture
  - For smartphones and desktop (UNIX)
  - First tests for integration as module into the UMOBILE architecture

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Which Requirements are we Meeting ?

- **PerSense Light v1.0 contributes to the following UMOBILE requirements**
  - R1: assists in understanding social trust circles; how they organize (contextual aspects) and their duration
  - R4: keeps all data local; relies on network mining and not on personal raw data capture
  - R10: helps in understanding the relation between location and social daily routines (roaming patterns and geographical regions)
  - R18: performs seamless sensing of user context
  - R20: provides feedback about networking dynamics, based on realistic social routines (roaming patterns)
  - R23: allows authorized people to track the routine of registered devices
  - R24: does not need an always on Internet access
  - R26: allows users to manage their trust circles
- **Sociability forecasting module in PerSense Light contributes to the following UMOBILE requirements**
  - R15, R16: assists in inferring user interests by analysing local usage
  - R18: performs seamless sensing of user context
  - R24: does not need an always on Internet access
  - R27: assists in matching familiar strangers' interests and assists in facilitating meetings

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Demo, PerSense Light

- **Apk running on Android devices**
  - Get it at Google Play
  - **Purpose:** scientific studies and traces; provide a concrete contextual inference (network mining)
  - Captures wireless foot printing aspects (distances, APs; visits type and duration
  - Data dumped to a specific database (SQLite) – server provided by Senception
  - Prepared to allow studies with any partner (binary)
  - ***Can be extended upon request, to capture parameters relevant to partner***
- **Benefits for UMOBILE**
  - Adequate contextualization aspects: goal of task 4.2
  - Traces
    - UMOBILE shall profit from a database provided by Senception
    - Traces sent to Crawdad once they are stable
  - Dissemination
    - Senception shall also work with interested partners to develop studies worldwide

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PerSense Light – Parameters tracked

- **Roaming data is collected in real-time**
  - Stored per day, week , 1 month – SQLite
  - Can be dumped to a server (night)
  - Collects visited APs and affinity networks
    - Distinguishes between connected APs and non-connected Aps; devices in contact and jut in the vicinity
- **Database Format (SQLite)**
  - ***Roaming tables***
    - 16 tables, 1 for each day of the week; 1 for each week 1 to 5; 1 for the month
      - Table entry tupple for each AP: <Id, bssid, dayoftheweek, state, ssid, attractiveness*, lastgatewayIP*, dateTime, lat, long>
    - ***Visits table***
      - Connected APs
      - Entry tuple: <Id, ssid, bssid, timeon, timeout, dayoftheweek, hour>

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PerSense Light – How does it work

- **Database Format (SQLite)**
  - ***Affinity Network tables***
    - Captured via Wi-Fi Direct
    - 16 tables, 1 for each day of the week; 1 for each week 1 to 5; 1 for the month
      - Table entry tupple for each device in the vicinity: <Id, bssid, dayoftheweek, state, ssid, attractiveness*, lastgatewayIP*, dateTime, lat, long>
- **Data can be backed up to a server provided by Senception**
- **Tutorial on how to use the tool to be provided by Senception upon request to partners, after the plenary**
- **Extensions are feasible – new binary can be provided by Senception, upon agreement with partner/consortium**
- **Senception wants to develop studies (papers) with partners**
  - Multiple countries, different demographics
  - We commit to analyze the collected data

*** Fields not in use in this version.**

DEMO


DANKSCHEEN
TASHAKKUR ATU
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TINGKI
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SHUKURIA
GOZAIMASHITA
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