## Lifelogging - Device Setup

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Revision: 171120  
Effective date: 11/20/2017

# Purpose

This protocol describes the setup of the Lifelogging wearable system prior to beginning data collection on a subject.

# Terminology

* The Lifelogging device is a wearable phone that passively collects image, audio (obfuscated), accelerometry, and GPS data during the wearer's everyday life. It also provides a vehicle for deploying the Cognitive Battery, which requires the wearer to periodically start an app and perform active cognitive tests.
* The Cognitive Battery (or CogBat) is a set of computerized tasks for the Android operating system, running on the [SMILE experiment-writing library for Python](https://osf.io/3zh7s/).

# Assignment of responsibilities

A principal operator should be assigned to set up and manage the Lifelogging devices for each given study group.

Device IDs:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Operator(s):  
Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Init\_\_\_\_\_\_ Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Init\_\_\_\_\_\_

# Required credentials/training

No special qualifications required.

# Required materials

* Plum Axe Plus 2 smartphone, model Z404
* Account information\* for the master Lifelogging GMail account (lifelogging.osu@gmail.com)
* Account information\* for the subject Lifelogging GMail accounts (OSUcompmem+axe*XXX*@gmail.com, where XXX is the left-zero-padded phone number, i.e. 001, 002, etc.)
* Account information\* for the Lifelogging MobiLock Pro account. (The lab has a MobilLock Pro account with a yearly subscription fee and an online portal for remotely managing the settings of all the devices. The email for the account is lifelogging.osu@gmail.com.)
* Unforgettable.me app for Android (by author Simon Dennis), available on Google Play
* GPSLogger app for Android (by author Mendhak), available on Google Play
* [Cognitive Battery .apk installer file](https://osf.io/3zh7s/)
* USB Micro B transfer cable
* Cognitive Battery Overview protocol
* MobiLock Pro app for Android, available on Google Play.

\**Passwords can be obtained from the previous project manager (as of 2017, Mike Gravina, gravina.2@osu.edu).*

# Methods and procedures

## Smartphone setup

Set up the smartphone with the following settings:

* Display set to sleep after 5 minutes and set to stay in portrait view when the device is rotated.
* Location set to "High accuracy" mode.
* Google account lifelogging.osu@gmail.com
* Date & time set to automatic time and automatic time zone. When in Ohio, it should automatically select "GMT-04:00 Eastern Daylight Time". Time should be in 12-hour time format.
* Bluetooth disabled.

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## App setup

Install the following apps with the specified settings:

* **Unforgettable.me**
  + Each phone should be set up with a different gmail account for Unforgettable.me, with naming conventions as described in the *Required materials* section.
  + On the "Setup" tab:
    - Accelerometer, GPS, Audio and Camera should be On.
    - Raw Audio should be Off.
    - Days to review should be 1.
    - Recording trigger should be Time.
    - Trigger interval should be 30s.
    - Autofocus and Notifications should be Off.
  + Once these are set, the app should be locked by pressing the button on the lower right corner of the "Login" tab. (To unlock the app, press the button again and then enter the password through the standard password field.)

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* **GPSLogger**
  + In "General Options", Start on bootup and Start on app launch should be enabled.
  + In "Logging details", only Log to CSV should be enabled.
  + In "Auto send, email and upload":
    - Allow auto sending and Send on Wi-Fi only should be enabled.
    - How often? should be set to 1440 minutes.
    - Scroll down and press Email.
      * Allow auto sending should be On.
      * Target email addresses should be OSUcompmem+subjXXX@gmail.com.
      * Mail provider should be Google Mail.
      * Username and From Address should be OSUcompmem@gmail.com (without the subject ID)
      * Password is the password for that GMail address.
      * Server is smtp.gmail.com.
      * Port is 465.
      * Use SSL? is On.

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* **CompMem Cognitive Battery app**
  + Refer to the Cognitive Battery Overview protocol for instructions for installing the CogBat app.
  + Start the app and go to the subject ID screen. Enter the subject ID, and lock the ID (this can be done from the "Settings" button menu). Proceed to the next screen, then exit the app before beginning the tasks.

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* **MobiLock Pro**
  + The MobiLock website allows you to log in and manage device profiles which can be assigned to multiple devices. We set up one device profile named "Standard".
    - On the "Edit Profile" screen for this profile, the Select Apps tab should show all of the above apps and the Browser and Clock apps as both Enabled and Visible on homescreen.
    - On the "Optional settings" screen, Allow users to access 'Wifi Connection' inside of app and Allow users to connect/disconnect from Wifi Network should both be enabled.
  + On the "Devices" screen of the website, an entry should exist for every phone, named "Axe*XXX*" with XXX being the left-zero-padded phone number (i.e. 001, 002, etc.).
  + On each phone, enter the MobiLock Pro app and log in with the corresponding phone ID.

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All of the apps above should be given full permissions. This can be accomplished by going to the the Android Settings/Apps menu, selecting each of the apps above in the menu, selecting "Permissions", and making sure that all of the listed permissions are enabled.

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## Prep for deployment

When the phones are in the field, MobiLock Pro should be activated so that the subjects are locked out of all but the chosen apps. If necessary, you will be able to make remote changes to the MobiLock lockout settings through the online portal, as long as the phones are connected to WiFi.

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# IRB protocols

* 2009B0093: Networks of Memories

# Revisions

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| --- | --- | --- |
| **SOP Revision #** | **Date** | **Description of change(s)** |
| 170920 | 09/20/2017 | First version |
| 171120 | 11/20/2017 | Updated MobilLock to show Browser app |