WEBINAR SERIES OSS DEVELOPERS IN PHYSICAL BEHAVIOR RESEARCH FIELD

3RD OF SEPTEMBER 2019 (WEST OF INDIA),
4TH OF SEPTEMBER (EAST OF INDIA)

AGENDA - WEBINAR SERIES OSS DEVELOPERS IN PHYSICAL BEHAVIOR RESEARCH FIELD (9-2019)

- Welcome
- Personal introductions, this time by:
  - Tom
  - Vincent
  - Hyatt
  - Ruben
- Presentation + Discussion of: Aims, rules of conduct, and practicalities
- Presentation by Vincent on generic R function for reading accelerometer data in csv files
- Wrap-up

PERSONAL INTRODUCTIONS

TOM, VINCENT, HYATT, AND RUBEN

AIMS OF THIS WEBINAR SERIES

- Platform for research software/algorithm developers to meet each other
- Support each other in research software development challenges
- Better awareness and understanding of each other's work
- Work towards improved OSS re-use, compatibility, and quality
- Advocate OSS
- Open to any expertise level

PROPOSED RULES OF CONDUCT

1. If you do not make your (main) code Open Source, then we would rather not have you in this group.
2. Bad software or algorithms do not exist in this group. Feedback should always be constructive, and nobody should feel afraid to present their work.
3. Everything discussed in this group is not confidential, unless the presenter explicitly asks for confidentiality.
4. We adhere to the Open Source license definitions, where code that comes with an open source license can be used by others as specified by the license.

PRACTICALITIES

1. Presentation can be flexible in duration
2. Focus: Software and Algorithms, but we can go broader
3. Upon request we can record a webinar
4. One webinar per month?

FEEDBACK?
QUESTIONS?

PRESENTATION VINCENT

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INTRODUCTION

- Variety of accelerometer data formats exists
- Would be nice to work with all of them
- **Aim:** Generic R function that for reading a variety of .csv file structures
- For example:
  - Files with or without file header
  - Variations in column location
  - Variations in unit of measurement

APPROACH

Wrapper around data.table::fread().

Example Input:

```
D4 = read.myacc.csv(rmc.file=testfile[4], rmc.nrow=20, rmc.dec=".",
                    rmc.firstrow.acc = 11, rmc.firstrow.header=1,
                    rmc.col.acc = c(1,3,4), rmc.col.temp = 5, rmc.col.time=2,
                    rmc.unit.acc = "g", rmc.unit.temp = "C",
                    rmc.format.time = "%Y-%m-%d %H:%M:%OS",
                    rmc.origin = "1970-01-01",
                    rmc.desiredtz = "Europe/London",
                    rmc.sf = 100,
                    rmc.headername.sf = "sample_frequency",
                    rmc.headername.sn = "serial_number",
                    rmc.headername.recordingid = "ID")
```

Output (list objects):

- Header, a data.frame
- Acceleration data, a data.frame

AREAS FOR IMPROVEMENT

- Extract columns with miscellaneous information, e.g. light sensor or button presses
- Facilitate wider range of timestamp formats and missing timestamps.
- Facilitate resampling of timestamps
- Facilitate working across time-zones

QUESTIONS

- Has anyone tried to do the same?
- Currently part of GGIR development branch, should I move it to separate R package?
  - Advantage: Opportunity to work on community wide standard
  - Disadvantage: Requires collaboration effort
  - Alternative: Only seek consensus on output format

WRAP UP

- Volunteer presenters for next time?
- Repeat same time/day in first week of the month?
- Online place to keep minutes and schedule: GitHub repo or Google doc?
- Feedback on first session?