Mavep: An Application for Miibyo by Analyzing and Visualizing Electrocardiogram and Plethysmogram

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Myocardial Infarction
Cerebral Embolism
Arteriosclerosis
Myocardial Infarction
Hypertension
Hyperlipidemia
Healthy

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Usage

- File Selection & Open
- Users open CSV files of raw data of ECG and PTG
- Mavep supports files in several column formats.

- Automatic Data Analysis
- Mavep detects feature points from each data of ECG and PTG by specific algorithms
- It enables users to adjust positions of detected feature points.

- Visualize Charts & Indices
- Mavep shows each time series charts and averages and SD of each index.
- It recalculates in response to users operations to enable/unable each pulse.

- Assessment of Autonomic Nervous Activities
- Users browse and evaluate each information.
- Users can save it as CSV files for further analysis with external applications.

ECG pane

The ECG pane shows time-series charts of indices calculated from raw ECG data in each tab page respectively.

- R Interval
- PR Interval
- PR Segment
- QT(c) Interval
- PR Segment

- Waveform

PTG pane

The PTG pane shows time-series charts of indices calculated from raw PTG data in each tab page respectively.

- Time and Height of feature points (a, b, c, d, and e)
- Area
- Acceleration PTG
- Aging Index (AGI)
- Waveform

INFO pane

The information pane shows values of indices at the current position of cursors, which is black vertical line or light blue box especially in the waveform tabs.

1. File Selection & Open
2. Automatic Data Analysis
3. Visualize Charts & Indices
4. Assessment of Autonomic Nervous Activities

Available in index indicates progress of arteriosclerosis

AGI = 2 – 3 – c – d – e

Myocardial Infarction
Cerebral Embolism
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Usable

- In synchronization with each chart, users can change the view of the charts.
- Zoom (Vertical, horizontal, fit chart)
- Sort (blood bars, dragging)
- Users can switch the current tab between the waveform tab and one of the other tab pages, keeping the cursor position.

Portable

- Available on Windows, Mac OS X, and Linux
- Written in Java
- Same application package (binary files) can run on them

Healthy
Hypertension
Hyperlipidemia

Usage

- Electrocardiogram and Plethysmogram
- Analyzing and Visualizing

Myocardial Infarction
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Usable

- Double click
- Zoom (Vertical, horizontal, fit chart)
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