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Raw data from the sensors are aggregated into larger time frames and then used to plot the sleep graph and compute statistics.

Sleep graph screen

The graph screen shows up to three graphs: actigraph, hypnogram and noise graph (when Sleep noise recording is enabled). It also gives some numbers about your night, along with an option to rate and tag the record.

A healthy sleep (if you are a monophasic sleeper) is 7-8 hours long and consists of 5 sleep cycles where the first lasts for 70-100 minutes and the consequent cycles get longer but lighter. Each cycle consists of 5 stages lasting usually 5-15 minutes. Stage 1 and 2 are considered light sleep and this is the best time to be woken up in the morning. So a healthy sleep cycle looks like a 10-30 minutes of light sleep (high peaks) followed by an area of deep sleep (low peaks or no peaks) lasting 40-100 minutes. Different resources on sleep may provide different figures though.

So deep sleep % may actually range between 30%-70%. Figures out of this range may indicate either incorrect sleep tracking setup (see Setup sleep tracking TODO:) or some sleep issues. For example very low deep sleep % may indicate either sleep deprivation or issues in your life style such as higher alcohol or caffeine intake, not enough sport etc. See an example of such sleep graphs in the figure below.

Numbers

[numbers]	Numbers on the sleep graphs lorem ipsum - Date of the
	tracking - data is used for the morning (or day), when the
	trackign ended (TODO máme někde vysvětlení, proč ne k tomu
	předchozímu?) - [ic share variant] - share button - [ic dots
	vertical] - graph menu - Comment - Noise - Legend - Color palette
	- Documentation - Show on map - Delete location - Delete - Deep
	sleep: a ratio (%) and a duration (HH:MM) of all your deep sleep
	phases during the tracking Duration : sleep duration (sum of all
	sleep phases, awakes are not counted), and the surplus / deficit
	(šlo by tohle slovo udělat červeně?) from you Ideal daily sleep
	income Snoring : a percentage of time you were snoring during
	that tracking, and its total duration.

Actigraph

[acti]	Actigraph is a visualization of the intensity of your nightly
	movements. The higher the peak, the more you've been moving.

Hypnogram

[phase]	Red	sections	on	graph
[red]				

The hypnogram shows your sleep phases progress during the night, estimated from actigraphy data and other inputs (e.g. awake periods). - Awake: the highest column reaching the top of the graph- - REM phase and light sleep: shown as medium green, REM has lower columns. - Deep sleep: shown as the lowest columns. - Red sections: if you see any red section on your graph, the app did not receive data from sensor (see TODO)

Noise graph

[snore]

The noise graph shows how much noise (sleep talk, snoring, environmental) was there throughout the night. When sound recognition is enabled, sounds (cry, laugh, sneeze or cough, snoring and talking) are marked with icons (icons are explained TODO) - you can read more about sound recognition or snoring detection. TODO TODO TODOTODOTODOTODOOOOO

Color lines

Oxygen level (Oximeter) + heart rate [hrbr]

Light level + heart rate [light]

Breath rate (sonar) [br]

- Blue line = blood oxygen level if you are using oximeter. Blue dots with numbers indicate maximum and minimum (read more about breath rate monitoring)
- Red line = heart rate through the night. Red dots with numbers inside are the maximum and minimum heart rate (read more about heart rate monitoring).
- Orange line = light in your room in LUX units (read more about light awake detection).
- Turquoise (Blue-green) line = breath rate if you are using sonar Blue dots with numbers indicate maximum and minimum (read more about breath rate monitoring).
- **Dashed line** = smart period prior to alarm time (read more about Smart wake up).

Markers and Icons

Beside deep sleep, REM phase and light sleep, there are several other events depicted in the sleep graphs.

Icons on Actigraphy	[ic action pause] Pause of sleep tracking [clock] Alarms and snoozed alarms [ic action sunrise] Sunrise and sunset times [ic action noise] Snoring events [ic action cpap] Breath rate monitoring [ic battery 60] Battery (stand-by mode, or low battery)
Icons on Noise graph	[ic action talk] Sleep talking events [ic action sick] Cough and sneeze [ic action baby] Baby Cry [ic action laugh]Laugh [ic action mic] Sleep noise recordings [ic action dream] Lucid dreaming