C L A I M S

1. Sleep induction device for inducing changes during a sleep session of a user (100), wherein the sleep induction device comprises:

- at least one sensor for detecting a physiological characteristic of the user;
- a stimulator (200) which is configured to provide successive stimuli to the user to anticipate on the detected physiological characteristic (310,320), which successive stimuli define a guidance path, and which guidance path is to be followed by the user to guide the user in a transfer from a first sleep state to a second sleep state;
- a memory which is arranged to store values of detected physiological characteristics, and provided stimuli during the sleep session;
- a processing unit including a control programme which is programmed to determine a current sleep state of the user, which current sleep state is based on at least one detected physiological characteristic measured by the at least one sensor and which control programme is programmed to generate an initial guidance path to induce a change from the determined current sleep state to another sleep state;

characterised in that the control programme comprises

- a tracking programme which is programmed to continuously monitor the physiological characteristic during a guiding phase to determine if the user is following the initial guidance path by tracking a deviation of a detected physiological characteristic from an expected physiological characteristic which expected physiological characteristic is based on the initially provided guidance path;
- a tailoring programme (10a) which is programmed to tailor the initially provided guidance path during the same sleep session of the user to an updated guidance path when the tracked deviation exceeds a pre-determined margin.

2. Sleep induction device according to claim 1, wherein the tailoring programme selects the updated guidance path from a group of pre-programmed guidance paths.

3. Sleep induction device according to claim 1, wherein the tailoring programme is programmed to render a guidance path by a formula in which the guidance path is a function of the physiological characteristic.

4. Sleep induction device according to one of the preceding claims, wherein an effectiveness of the initially provided guidance path is rendered by said deviation, and wherein the tailoring

programme tailors said initial guidance path when said effectiveness is below a pre-defined margin.

5. Sleep induction device according to one of the preceding claims, wherein said change in the sleep session makes a user fall asleep, i.e. wherein the guidance path induces a change from a fully awakened state to at least a light sleep state.

6. Sleep induction device according to one of the preceding claims, wherein said sleep state is determined by a single or by multiple psychological characteristics.

7. Sleep induction device according to one of the preceding claims, wherein the device comprises a housing for housing components, and wherein the stimulator comprises a stimulator mechanism for frequently expanding and collapsing a body, to provide a stimulating rhythm to the user to influence the users respiratory rate.

8. Sleep induction device according to one of the preceding claims, wherein said body is formed as a pillow, wherein the housing has a soft outer skin.