Contactless Home Breath Monitor

Emerald Innovations, Inc.

Emerald

Passive, contactless mechanism to measure a variety of physiological metrics and vital signs such as:

- Gait
- Mobility
- Breathing
- Sleep Actigraphy
- Sleep Stages

Particularly beneficial to COVID-19 patients, enabling remoting monitoring of their vital signs, while minimizing contagion.
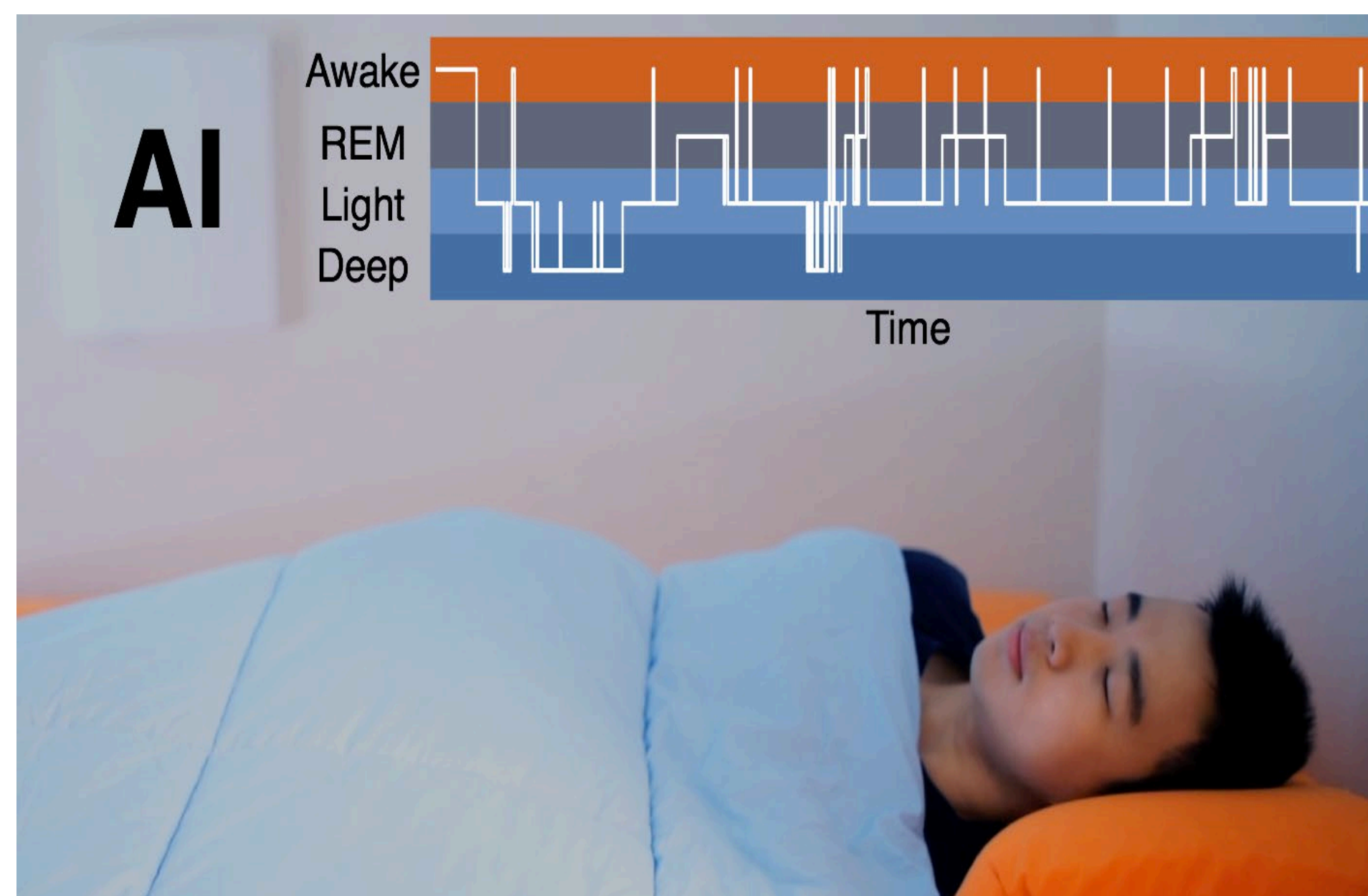

EMERALD DEVICE

How Emerald Works

- Emerald Device sends out low power radio waves and receives the reflections of these signals from people and objects in the environment

- Uses signal processing and cloud based AI processing to derive a variety of health metrics

- Emerald measures health metrics as people live in their homes and go about their daily lives, without requiring them to modify their behavior in any way.
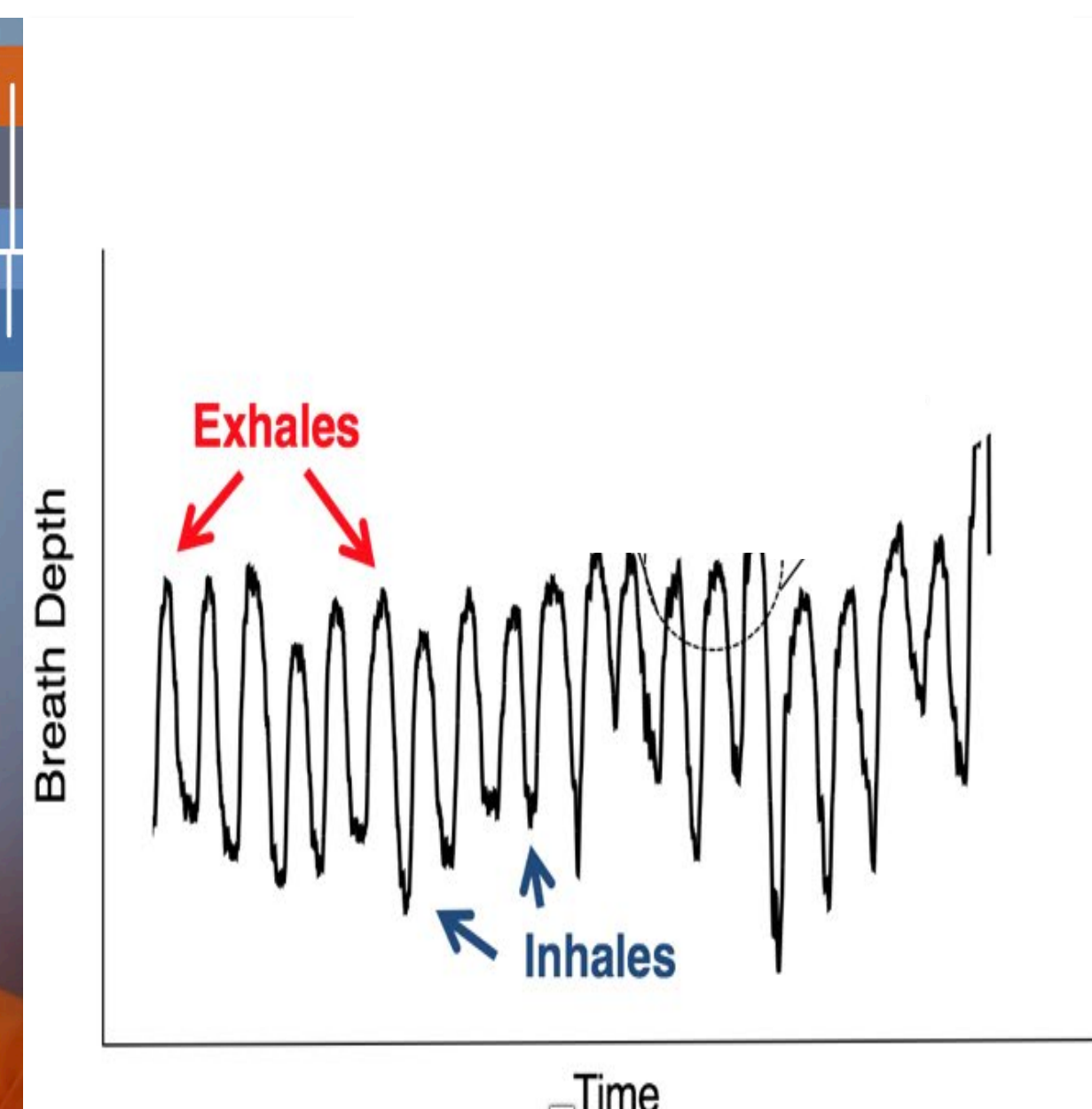
This Project: Enhance the Emerald system with the ability for patients to self-deploy Emerald devices using a mobile app, to enable remote monitoring of COVID-19 patients without requiring trained deployment staff

Emerald monitors subjects' sleep stages as they sleep in their own beds, without needing any wearables

Emerald monitors the breathing of a seated subject, capturing their inhales, exhales and breathing rate, without needing any wearables.

Summary

- Continuous and remote monitoring of COVID-19 patients' breathing and sleep is necessary to minimize the risk of contagion while still ensuring the health and safety of patients and caregivers.
- Emerald's passive and touchless monitoring of breathing and sleep is particularly beneficial for such patients.
- Emerald has been deployed by trained staff to monitor COVID-19 patients in homes and assisted living.
- In this project, Emerald will build a self-deployment app with remote assistance capabilities to allow participants to deploy in their homes without need for staff to enter patients' homes