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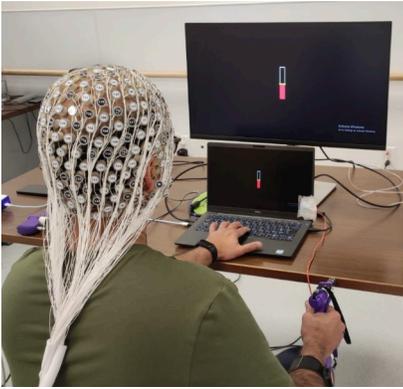
BEL Submits NEAT Sleep Staging Software for FDA 510 (k) Clearance

BEL is pleased to announce that the FDA has accepted for substantive review BEL's NEAT sleep staging software for 510(k) clearance as a medical device. Following the success of receiving FDA 510(k) clearance for its [SOURCERER](#) source estimation software in October 2024, BEL this month submitted its NEAT sleep staging software for FDA review and approval for 510(k) clearance. NEAT (Neurosom™ EEG Assessment Technology) is an innovative medical device software application that uses machine learning to streamline identification of different sleep stages post EEG-acquisition. BEL's partner company, [Neurosom™](#), uses the software as part of the Neurosom™ Sleep Therapy System to accurately track the user's sleep cycles at their bedside. Sleep stages are identified using advanced machine learning algorithms, and the results are displayed alongside comprehensive sleep statistics.



[Sleep WISP](#), a new product integrating NEAT, uses this precise sleep tracking to deliver gentle electrical stimulation at the right moments during the night. This stimulation helps nudge the brain into deeper, more restorative sleep stages, improving overall sleep quality and recovery.

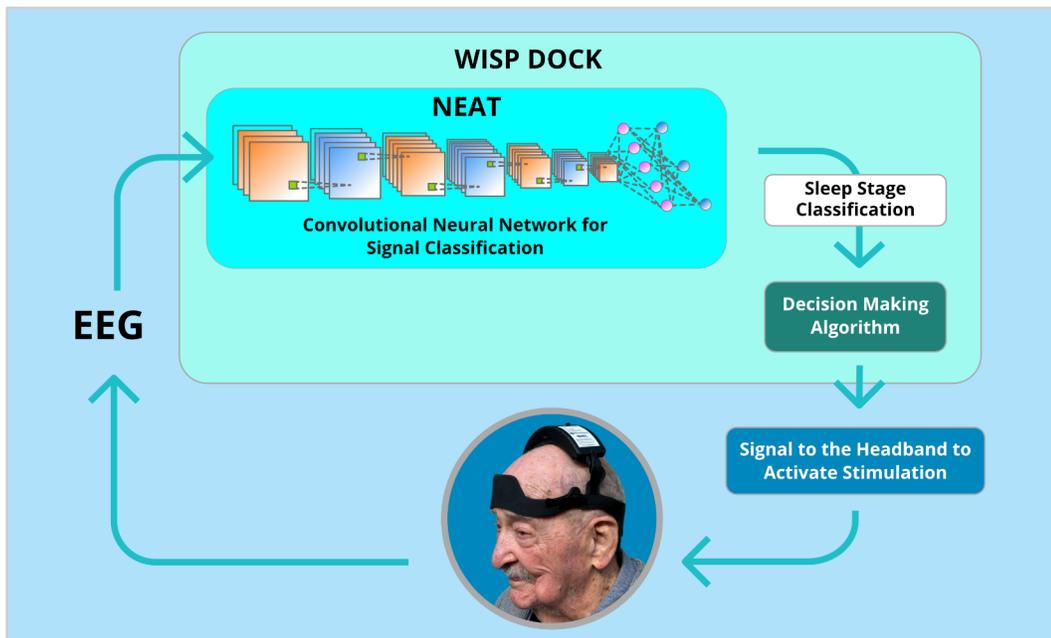




BEL recently supported groundbreaking research using its 280-channel Whole Head EEG system in collaboration with two leading German universities - University of Augsburg & University of Würzburg. Drs. Muthuraman Muthuraman & Manuel Bange, along with BEL's Chief Operating Officer, Viral Sheth, visited Dr. Simon Little's Movement Disorders and Neuromodulation Center in San Francisco to collect multimodal wireless HD EEG, EMG, ECG data from over a dozen Parkinson's disease patients.

These patients, equipped with the latest bi-directional DBS system as well as intracranial electrodes, participated in studies aimed at better understanding the circuits and signals underlying their symptoms. This cutting-edge electrophysiological approach seeks to uncover fundamental brain mechanisms and advance new personalized, responsive neuromodulation therapies for movement disorders.

Customers interested in this line of research or developing machine learning applications for HD EEG should contact [BEL technical support team](#).



NEAT draws on the convolutional neural network machine learning architecture that BEL has integrated within the FLOW platform. Although the FDA submission focuses on the validation of this technology for sleep stage classification, machine learning is a powerful method for EEG feature classification generally. Customers interested in developing machine learning applications for their HDEEG applications should contact [BEL technical support](#).

