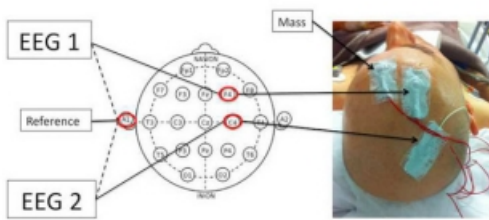
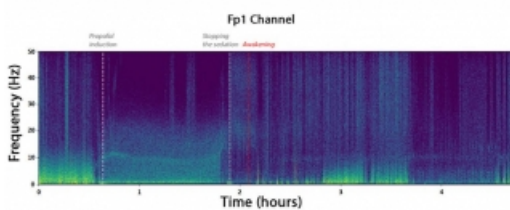


SmartRea system

The SmartRea system is an anesthesia monitoring device that provides a large number of physiological variables in the operating room.



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Presentation

The SmartRea system is a large-scale project conducted in partnership with HIA Bégin and Thalès. It allows the acquisition, with a very good temporal resolution, of a large number of physiological variables recorded in the operating room (EEG, ECG, respiratory variables etc...). This innovative system allows to study the states of consciousness as well as the depth of anesthesia.

Scientific referent

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Bibliography

- C. Dubost, P. Humbert, L. Oudre, C. Labourdette, N. Vayatis, P.-P. Vidal. Quantitative assessment of consciousness during anesthesia without EEG data.
(<https://doi.org/10.1007/s10877-020-00553-4>) *Journal of Clinical Monitoring and Computing*, 2020
- P. Humbert, C. Dubost, J. Audiffren, L. Oudre. Apprenticeship Learning for a Predictive State Representation of Anesthesia. (<http://www.laurentoudre.fr/publis/HDAO-IEEE-19.pdf>) *IEEE Transactions on Biomedical Engineering*, 67(7):2052-2063, 2020.
- C. Dubost, P. Humbert, A. Benizri, J.P. Tourtier, N. Vayatis, P.-P. Vidal. Selection of the Best Electroencephalogram Channel to Predict the Depth of Anesthesia
(<https://doi.org/10.3389/fncom.2019.00065>). *Frontiers in computational neuroscience*, 13, 65, 2019.