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A quasi-wireless intraoperatory neurophysiological monitoring system

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Abstract-

Intraoperative Neurophysiological Monitoring is a set of monitoring techniques that reads electrical activity generated by the nervous system structures during surgeries. In non-trivial surgeries, neurophysiologists require a significant number of electrical signals to be picked up to check the effects of the surgeon’s actions in real time or to confirm that the correct nerves are selected. As a result, cabling the patient in the operating room can become cumbersome. The proposed WIONM module solves part of the problem by converting a good part of those cables into a wireless connection that is substantially transparent to the human operator and the existing medical instrumentation.

Index Terms- intraoperative monitoring; ECG; EMG; EEG; MEP; SSEP; AEP; wireless

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