Software infrastructure for EEG/ERP research

This paper deals with the software infrastructure for EEG/ERP (electroencephalography, event related potentials) research. The requirements for building this infrastructure have arisen from laboratory needs, unavailability of appropriate software tools and incompatibility of previously used commercial solutions. The standardization of EEG/ERP data formats and construction of complex and publicly open software infrastructure is also supported by International Neuroinformatics Coordinating Facility (INCF) since these efforts can significantly accelerate brain research. The presented software infrastructure includes the web based EEG/ERP portal as the central data storage for data/metadata obtained in EEG/ERP experiments and JERPA software as the desktop software tool for computationally demanding operations. Supporting libraries (e.g. library of signal processing methods), developed and integrated to EEG/ERP portal and/or JERPA software, are briefly described.

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