System for EEG/ERP Data and Metadata Storage and Management

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The paper introduces a system for EEG/ERP (electroencephalography, event-related potentials) data and metadata storage and processing. Since researchers have difficulties with a suitable long-term storage and management of electrophysiology data the presented system helps them to increase both efficiency and effectiveness of their work by providing the means for the storage, management, search and sharing of EEG/ERP data. The requirements specification including the system context, system requirements, project scope, basic features, system users, and data formats and metadata structures is presented. The database structure is proposed; upload, download and interchange of EEG/ERP data and metadata using the web interface are described. The system architecture, used technologies and final realization are described. Data and metadata search and user accounts including system security management are presented. Additional tools and structures as converters of data formats and semantic web ontology are mentioned.