AN ACTIVE MEDICAL INFORMATION SYSTEM FOR INFORMATION RETRIEVAL, DISCOVERY AND FUSION

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Abstract

To accomplish the retrieval, discovery and fusion of medical information from diverse sources, an active medical information system capable of retrieving, processing and filtering medical information, checking for semantic consistency, and structuring the relevant information for distribution is needed. We describe a framework for the human- and system-directed retrieval, discovery and fusion of medical information, which is based upon the observation that a significant event often manifests itself in different media over time. Therefore if we can index such manifestations and dynamically link them, then we can check for consistency and discover important and relevant medical information. This dynamic indexing technique is based upon the theory of active index. A powerful newly developed artificial neural network is used for the discovery of significant events. An experimental systemis implemented for further empirical research. A prototyping environment is available to prototype similar systems.