

TimeCaT: a Comprehensive Tool for Time Motion Studies

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Time Motion Studies (TMS) are the current gold standard method to measure and quantify clinical workflow. However, researchers use variable approaches to measure multitasking, interruptions, inter-observer reliability assessment and task taxonomy, producing results that are not comparable across studies. This lack of methodological standardization often renders TMS results questionable and can threaten the external validity of individual studies. The lack of easily customizable, comprehensive TMS tools presents a challenge to those conducting such studies that only exacerbates this methodological drift. To address this, we worked with informatics and TMS researchers to develop and optimize a flexible and comprehensive Time Capture Tool, and used our process and tool to propose, test and disseminate TMS tool standards. This demonstration presents our initial response to this gap in knowledge and practice: a freely available, fully customizable, web-based, time capture tool (TimeCaT) developed to support data capture for TMS that includes novel methods for assessing multitasking, interruptions, inter-observer reliability and taxonomy selection.

Khresmoi – Multilingual Semantic Search of Medical Text and Images

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The Khresmoi project is developing a multilingual multimodal search and access system for medical and health information and documents. This scientific demonstration presents the current state of the Khresmoi integrated system, which includes components for text and image annotation, semantic search, search by image similarity and machine translation. The flexibility in adapting the system to varying requirements for different types of medical information search is demonstrated through two instantiations of the system, one aimed at medical professionals in general and the second aimed at radiologists. The key innovations of the Khresmoi system are the integration of multiple software components in a flexible scalable medical search system, the use of annotation cycles including manual correction to improve semantic search, and the possibility to do large scale visual similarity search on 2D and 3D (CT, MR) medical images.