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Abstract

Medical decision support systems (MDSS) have been built to help healthcare providers in making diagnostic or treatment decisions as early as 1973. These are knowledge-based systems that utilize clinical decision logic derived from a process called knowledge acquisition. A major step in this process is knowledge engineering (KE) in which domain experts interact with knowledge engineers to formulate domain knowledge into computer logic. We built a Distributed Knowledge Acquisition Shell (DKAS) for medical decision support using a web browser as the platform and the Internet as the communication network. This DKAS will enable medical experts world-wide to participate in a KE session without physically being together in the one room at the same time.

During a KE session for MDSS, large

size of knowledge base and medical images (both clinical and pathological) from experts in different places must be exchanged, and videoconferences between them must be established. A high-speed internet that supports multicast and QoS is crucial to the success of such projects.

Keywords: Medical Decision Support Systems, Knowledge Acquisition, Knowledge Engineering, Knowledge Acquisition Shell, Knowledge Engineering Session, Next Generation Internet

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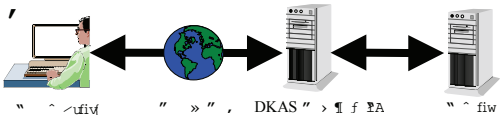

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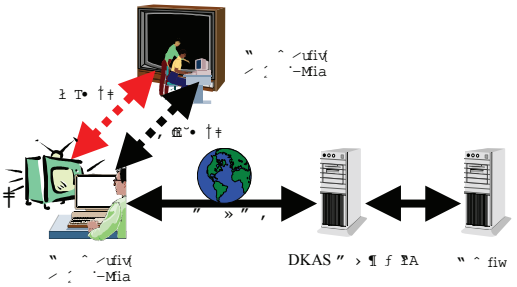

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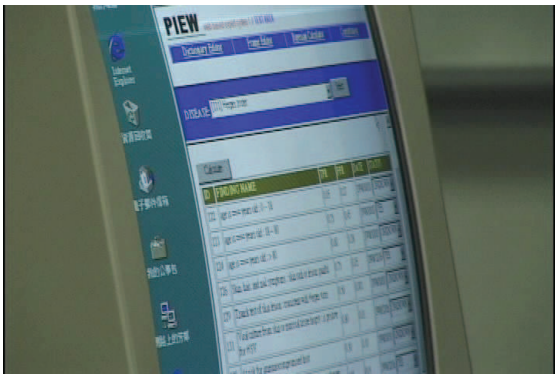

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