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• 中文關鍵字	醫療決策支援系統；知識擷取；知識工程；知識淬取殼
• 英文關鍵字	Medical decision support system；Knowledge acquisition；Knowledge engineering；Knowledge acquisition shell
• 中文摘要	本研究藉由資訊網路技術的進步，架構 World-wide 的醫學知識獲取系統。程式設計師以主從式架構建立醫學知識的資料庫，並提供 web 介面讓知識工程師將醫療決策的邏輯輸入該資料庫。我們定義這樣的介面做“知識獲取介殼”（Knowledge acquisition shell）。藉由網際網路（Internet）的普及性，世界各地的醫學專家都可以將其醫療決策邏輯透過知識獲取介殼輸入至醫學知識資料庫中。更進一步的，藉由視訊會議的技術，位於各地的醫學專家及知識工程師可以面對面的進行討論，並同時操作一個知識獲取介殼，完成一次知識工程會議。在一個知識工程會議中，各地的醫學專家可能交換大量的醫學知識或醫學影像；同時，他們也必須透過視訊會議進行彼此之間的討論。因此，需要一個寬頻且保證頻寬的全球連接網路，而本研究爲了證明新世代網際網路（Next Generation Internet; NGI）將會滿足我們的需求。在醫療決策知識庫建立後，更進一步的立醫療決策支援系統，以輔助臨床醫療人員更快速的做出診斷與決策，並評估醫療決策支援系統爲我們帶來的效益。
• 英文摘要	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 knowledgeinto 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.