

Exsys Case Study

JAMES MADISON UNIVERSITY

Crisis Intervention Counseling Agent (CICA)

Institute for Information & Infrastructure Assurance, James Madison University



The Institute for Information & Infrastructure Assurance at James Madison University used Exsys Corvid[®] to develop an intelligent Crisis Intervention Counseling Agent (CICA) to provide real time, interactive counseling assistance for crisis intervention teams when responding to disaster situations.

Because crisis intervention typically takes place in the field, one of CICA's main requirements was to be deployed on hand-held devices for use in such an environment. Corvid was chosen because the development tool supports complex probabilistic

reasoning, and its Java-based Runtime programs containing the Exsys Inference Engine allowed systems to be easily fielded on a variety of mobile devices by several techniques.

The CICA has been designed as a support tool to help guide crisis intervention volunteers; and also assists in training students and new counseling professionals to function effectively on crisis intervention teams. The system recommends a specific type of action to be taken based on the user's responses to specific questions regarding the crisis intervention process.

Previously crisis intervention volunteers had to provide aid based upon what they remember from their training. In some cases, there is a limited amount of knowledge and the training and experience varied. The new automated expert system approach provides consistent top-level, situation specific information and guidance to all crisis workers.

The CICA system recommends a course of action based on the clients' condition while in a state of crisis. CICA is able to combine user input with a knowledge base in order to expertly recommend a course of action for the crisis intervener.

The source of domain expertise was Dr. Lennis Echterling, the director of counseling psychology at James Madison University (JMU), and David Yost, a graduate psychology student at JMU. Dr. Echterling, having worked the aftermath of Hurricane Katrina and the campus shootings at Virginia Tech, has a great deal of experience in crisis intervention and Mr. Yost's graduate studies are in the crisis intervention field.

It is expected that the successful development of the expert system knowledge-base will be the basis for further development of CICA as a decision support system for disaster management and disaster recovery.



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