

EXSYS Case Study

Nuclear Weapons Security Classification



Nuclear weapons security classification guidance is defined by over 100 classification guides which state what information is, or is not, classified. It requires years of experience to be able to effectively and efficiently use the guide system to determine the correct classification of a document. Over classification can result in unnecessary expense and restriction of information; while under classification can result in the compromise of sensitive design information. To assist staff and automate the retrieval of classification policies appropriate to a particular document, a knowledge automation system was developed, using EXSYS software, by the DOE.

The knowledge automation system can correctly classify a document based upon input from a user on the contents of the document. The user is asked a series of questions about various aspects of the document. If the answers imply a potentially classified area, more detailed and specific questions are asked. The system keeps track of level (confidential, secret, top secret) and type (NSI, RD, FRD) simultaneously. Documents with multiple classified items can have the classifications combined correctly. This allows the knowledge automation system to greatly reduce the number of questions asked of the user, while making sure no areas of potential classification are overlooked.

A novice user can correctly arrive at the classification of a document in a few minutes, without having to refer to numerous classification guides. Once a classification is arrived at, the user can ask what guide topics apply and check them in greater detail.

Previous attempts at classification automation relied on very large databases on mainframes and limited trained staff. The knowledge automation system asks questions of the user rather than requiring the user to ask questions, so it can be used by novices easily. Also, the system can easily be run from a floppy disk on a laptop and does not require access to a mainframe.