Generating visualisation for crime scene investigation based on probability result of knowledge-based system

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ABSTRACT

Knowledge-Based System (KBS) and visualisation tool have played a major role to support the activities of human decision-making including in Crime Scene Investigation (CSI). However, there is an increasing concern that visualisation tools and KBS are not being applied effectively. The way it is presented as evidence or when expressed as a hypothesis may not be correct. In CSI, uncertainty is a common problem situation in the decision-making process. This paper discusses a framework of integrated KBS and visualisation for CSI. In the KBS, probabilistic reasoning can deal with uncertainty in decision-making by generating the numerical results of probability. Then, the numerical results from the KBS have been applied in ProModel software to generate a 2D visualisation based on the expertise and knowledge of the decision-maker. A very positive response has been obtained by experts in terms of supporting decision-making and investigation strategy.

KEYWORDS

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